

**UNITED STATES NAVAL WAR COLLEGE
COLLEGE OF NAVAL COMMAND AND STAFF
AND
NAVAL STAFF COLLEGE**

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THE JOINT MILITARY OPERATIONS DEPARTMENT

SYLLABUS AND STUDY GUIDE

FOR THE

JOINT MARITIME OPERATIONS

RAYMOND A. SPRUANCE WARFIGHTERS COURSE

FEBRUARY 2016

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FOREWORD

This syllabus provides a comprehensive overview of the Naval War College Joint Military Operations Department course on Joint Maritime Operations. Prepared for the College of Naval Command and Staff and the Naval Staff College, this syllabus, along with the JMO Blackboard website and iPad, provides session-by-session material to assist the student in daily seminar preparation and development of a personal plan of study. Administrative information is also included.

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**JOINT MILITARY OPERATIONS DEPARTMENT
SPRUANCE COURSE**

FOREWARD	i
TABLE OF CONTENTS	iii
COURSE STUDY GUIDES	iv
1. Mission.....	vii
2. Course Objectives	vii
3. Course Overview	vii
4. CJCS Officer Professional Military Education Policy	viii
5. Course Organization	xi
6. Syllabus Organization.....	xiv
7. Methods of Instruction.....	xv
8. Readings.....	xvi
9. JMO Research Paper.....	xviii
10. Plagiarism, Misrepresentation, and Cheating	xviii
11. Requirements	xix
12. JMO Department Grading Criteria	xxi
13. Seminar Assignments.....	xxvii
14. Schedule.....	xxvii
15. Key Personnel	xxviii
16. Faculty Assistance	xxix
17. Student Critiques.....	xxix
18. Lectures by Senior Military Leaders.....	xxix
19. Non-Attribution Policy	xxix
20. Course Calendar.....	xxx
21. Faculty Biographies	xxx

COURSE STUDY GUIDES

INTRODUCTORY SESSIONS

JMO-01	Introductory Lecture (Lecture)	1
JMO-02	Introductory Seminar (Seminar)	3
JMO-03	JMO Research Paper (Seminar)	5

NAVAL TACTICS AND CAPABILITIES

JMO-04	Introduction to Naval Tactics (Seminar)	11
JMO-05	The Tactical Employment of Naval Forces: Objectives and Methods (Seminar)	15
JMO-06	Naval Platforms, Weapons, and Sensors (Seminar)	19
JMO-07	Fundamentals of Surface Warfare (Seminar)	23
JMO-08	Fundamentals of Submarine Warfare (Seminar)	27
JMO-09	Fundamentals of Naval Air Warfare (Seminar)	29
JMO-10	Tabletop Exercise #1: Organizing Naval Assets in the Open Ocean (Seminar and Exercise)	33

JOINT OPERATIONAL WARFARE

JMO-11	Introduction to Operational Art (Seminar)	36
JMO-12	The War in the Pacific (Lecture)	39
JMO-13	Military Objectives and the Levels of War (Seminar)	43
JMO-14	The Theater: Its Structure and Geometry (Seminar)	47
JMO-15	Operational Factors (Seminar)	51
JMO-16	Operational Functions (Seminar)	55
JMO-17	Major Operations/Campaigns and their Elements (Seminar)	59
JMO-18	Operational Design (Seminar)	65
JMO-19	Operational Thinking and Leadership (Seminar)	69
JMO-20	A Critique of Doctrine: U. S. Doctrine and Operational Art (Seminar)	75

NAVAL WARFARE THEORY

JMO-21	Introduction to Naval Warfare Theory (Seminar)	79
JMO-22	The Maritime Environment (Seminar)	83
JMO-23	The Objectives of Naval Warfare: Control and Denial of the Sea (Seminar)	89
JMO-24	Combined Arms: Fundamentals of Anti-Surface Warfare (Seminar)	95
JMO-25	Combined Arms: Fundamentals of Anti-Submarine Warfare (Seminar)	99

JMO-26	Combined Arms: Fundamentals of Naval Counter-Air Warfare (Seminar)	105
JMO-27	Combined Arms: Fundamentals of Amphibious Warfare (Seminar)	109
JMO-28	Combined Arms: Fundamentals of Mine Warfare (Seminar)	113
JMO-29	Combined Arms: Maritime Trade Warfare (Seminar)	117
JMO-30	Designing Major Naval/Joint Operations (Seminar)	121
JMO-31	Tabletop Exercise #2: Analysis of the Struggle for Guadalcanal (Exercise)	125
JMO-32	The Falklands/Malvinas Conflict (Lecture and Practical Exercise)	129
JMO-33	Examination #1 (Individual Effort)	133

MARITIME OPERATIONAL LAW

JMO-34	Maritime Operational Law (Lecture)	135
JMO-35	Legal Basis for the Use of Force and Law of Armed Conflict (Lecture)	139
JMO-36	Rules of Engagement Case Studies (Seminar)	145
JMO-37	Operational Law Case Study (Seminar)	149

THE SERVICES, THEIR DOCTRINE, AND FUNCTIONS

JMO-38	U. S. Navy Organization and Employment (Seminar)	153
JMO-39	U. S. Marine Corps Organization and Employment (Seminar)	155
JMO-40	U. S. Coast Guard Organization and Employment (Seminar)	159
JMO-41	U. S. Army Organization and Employment (Seminar)	161
JMO-42	U. S. Air Force Organization and Employment (Seminar)	163
JMO-43	U. S. Special Operations Forces Organization and Employment (Seminar)	167
JMO-44	Naval Command and Control (Seminar)	171
JMO-45	Logistics and Deployment (Seminar)	175
JMO-46	Operational Intelligence for the Maritime Commander (Seminar)	181
JMO-47	Information Operations and Cyberspace (Seminar)	187
JMO-48	Conflict Termination: Criteria and Defeat Mechanisms (Seminar)	193
JMO-49	Stability Operations (Seminar)	197
JMO-50	Tabletop Exercise #3: PRC-Taiwan Case Study (Exercise)	203

OPERATIONAL DECISION MAKING AND MILITARY PLANNING

JMO-51	Problem Solving and Complexity (Seminar)	207
JMO-52	The Logic of the Commander's Estimate and Decision (Seminar)	213
JMO-53	Adaptive Planning and Execution System (APEX) (Seminar)	219
JMO-54	Orders and Orders Development (Seminar)	221
JMO-55	Tabletop Exercise #4: An Analysis of VADM Kinkaid's Operations Order (Leyte Invasion) (Exercise)	225
JMO-56	Introduction to the Navy Planning Process (Seminar)	229
JMO-57	The Struggle for Sea Control (Exercise)	233
JMO-58	Tabletop Exercise #5: Critiquing the Operations Order (Seminar)	235

NAVAL OPERATIONS SHORT OF WAR

JMO-59	Naval Operations Short of War (Lecture)	239
JMO-60	Naval Support of Foreign Policy (Seminar)	243
JMO-61	Homeland Security (Seminar)	249
JMO-62	Combating Piracy (Seminar)	253
JMO-63	Foreign Humanitarian Assistance/Disaster Relief (Seminar)	259
JMO-64	Insurgency (Seminar)	263
JMO-65	Counterinsurgency (Seminar)	267
JMO-66	Hybrid and Unconventional Warfare, Irregular Warfare, and Civil-Military Operations (Seminar)	271
JMO-67	Peace Operations (Seminar)	275
JMO-68	JMO Examination #2 (Individual Effort)	281

JOINT PLANNING: EXPLOITING CONTROL OF THE SEA

JMO-69	The War at Sea Exercise (Wargame)	283
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ADDENDUM

Course Calendar.....	285
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THE ADMIRAL RAYMOND A. SPRUANCE COURSE

It cannot be too often repeated that in modern war, especially in modern naval war, the chief factor in achieving triumph is what has been done in way of thorough preparation and training before the beginning of war.

—President Theodore Roosevelt,
U. S. Naval Academy Address, 1902

1. Mission:

Officer Professional Military Education Policy (OPMEP) Mission

The Intermediate Level Course (CNC&S/NSC) mission is to expand student understanding of Joint Matters from a Service component perspective at the operational and tactical levels of war.

Joint Maritime Operations Department Spruance Course Mission

During the Joint Maritime Operations trimester of the College of Naval Command and Staff/Naval Staff College, students will become skilled at employing maritime power across the range of military operations in order to achieve tactical and operational objectives in support of a joint force.

2. Course Objectives

The objectives below are derived from the Department mission statement and detail the expectations for those who successfully complete the Joint Maritime Operations trimester. Each seminar or lecture has tailored objectives that support these course objectives:

- Expand critical and creative thinking and develop problem solving skills as they pertain to decision making and leadership in the maritime domain.
- Develop students grounded in Operational Art and Naval Warfare Theory including practical application across the spectrum of conflict.
- Apply the Joint/Navy Planning Process to volatile, uncertain, complex, and ambiguous problems and develop written orders designed to resolve them.
- Understand how to employ maritime power in the attainment of assigned joint and service objectives.

3. Course Overview

The Spruance Course presented by the Joint Military Operations Department is an in-depth study of the upper tactical and lower operational levels of war throughout the full spectrum of military operations.

It is first and foremost a warfighter's course that recognizes the inherent difficulties associated with planning for and executing major combat operations at sea.

As such, it will prepare students to excel in the operational arena through an understanding of the effective employment of naval power involving joint forces to achieve military objectives. A focus will be put on refining your analytical skills as well as both critical and creative thinking abilities. The emphasis in this Department is on developing your warfighting and leadership skills through the lens of operational art and the theory of naval warfare to develop creative solutions to ill-structured problems. Although maritime operations and sea service contributions are emphasized, the capabilities of all services are studied with the ultimate focus on planning and execution of joint operations at the fleet and joint maritime component commander levels—in the maritime environment.

The trimester will flow from the simple to the more complex, culminating in a final planning exercise intended to allow students to display their comprehension of the rational employment of joint power and to demonstrate critical and creative thinking skills. There are themes that permeate the course: the theoretical themes include operational art and naval warfare theory while the practical themes include naval tactics and operations planning, operational leadership, naval operations short of war, maritime operational law, and joint operation planning. Through extensive study of multiple historical case studies, the JMO student is challenged with four enduring questions from the perspective of maritime and Joint Force Commanders (JFC) and their staff planners:

- What are the objectives and desired end state? (Ends)
- What sequence of actions is most likely to achieve those objectives and end state? (Ways)
- What resources are required to accomplish that sequence of actions? (Means)
- What is the likely chance of failure or unacceptable results in performing that sequence of actions? (Risk)

The ability to answer these questions is the essence of the Joint Maritime Operations course.

4. CJCS Officer Professional Military Education Policy

The 2007 National Defense Authorization Act revises the definition of joint matters to include the integrated use of military forces that may be conducted under unified action on land, sea, or in air or space, or in the information environment with participants from multiple armed forces, U. S. Armed Forces and other U. S. departments and agencies, U. S. Armed Forces and the military forces or agencies of other countries, U. S. Armed Forces and non-governmental persons or entities, or any combination thereof. Accordingly, for purposes of clarity, the term “joint” includes multinational and interagency partners.

The Chairman of the Joint Chiefs of Staff (CJCS) Instruction CJCSI 1800.01_ sets the policies, procedures, objectives, and responsibilities for both officer Professional Military Education (PME) and Joint Professional Military Education (JPME). It directs the services and service colleges to comply with the Officer Professional Military Education Policy (OPMEP) by meeting Joint Learning Area objectives defined in the OPMEP. This syllabus

lists the CNC&S and NSC Syllabus for 2016 lists the Naval War College (NWC) objectives to be addressed in each session.

The Intermediate-Level College (ILC) Joint Learning Area objectives below are presented to highlight the linkage between the syllabus and joint learning areas prescribed by the CJCS. The Professional Military Education (PME) outcomes for the College of Naval Command and Staff and the Naval Staff College are designed to produce officers fully capable of serving as leaders or staff officers at the upper tactical and operational level of war. The following Intermediate-Level College (ILC) Joint Learning Area (JLA) objectives are presented to highlight the linkage between the syllabus and the Joint Learning Areas prescribed by the CJCS.

Learning Area 1 - National Military Capabilities Strategy

- a. Comprehend the capabilities and limitations of U. S. military forces to conduct the full range of military operations in pursuit of national interests.
- b. Comprehend the purpose, roles, functions, and relationships of the President and the Secretary of Defense, National Security Council, Homeland Security Council, Chairman of the Joint Chiefs of Staff, Joint Chiefs of Staff, combatant commanders, Joint Force Commanders (JFCs), Service component commanders, and combat support organizations or agencies.
- c. Comprehend how the U.S. military is organized to plan, execute, sustain, and train for joint, interagency, intergovernmental, and multinational operations.
- d. Comprehend strategic guidance contained in documents such as the National Security Strategy, the Quadrennial Defense Review, National Military Strategy, Global Force Management Implementation Guidance (GFMIG), and the Guidance for the Employment of the Force (GEF).

Learning Area 2 - Joint Doctrine and Concepts

- a. Comprehend current joint doctrine.
- b. Comprehend the interrelationship between Service doctrine and joint doctrine.
- c. Apply solutions to operational problems in a volatile, uncertain, complex, or ambiguous environment using critical thinking, operational art, and joint doctrine.

Learning Area 3 - Joint and Multinational Forces at the Operational Level of War

- a. Comprehend the security environment within which Joint Forces are created, employed, and sustained in support of JFCs and component commanders.
- b. Comprehend joint force command relationships.
- c. Comprehend the interrelationships among the strategic, operational, and tactical levels of war.
- d. Comprehend how theory and principles of joint operations pertain to the operational level of war across the range of military operations to include traditional and irregular warfare that impact the strategic environment.

- e. Comprehend the relationships between all elements of national power and the importance of comprehensive approaches, the whole of government response, multinational cooperation, and building partnership capacity in support of security interests.
- f. Analyze a plan critically for employment of joint and multinational forces at the operational level of war
- g. Comprehend the relationship between national security objectives, military objectives, conflict termination, and post conflict transition to enabling civil authorities.

Learning Area 4 - Joint Planning and Execution Processes

- a. Comprehend the relationship among national objectives and means available through the framework provided by the national level systems.
- b. Comprehend the fundamentals of joint operation planning across all phases of a joint operation.
- c. Comprehend the integration of joint functions (command and control, intelligence, fires, movement and maneuver, protection, and sustainment) to operational planning problems across the range of military operations.
- d. Comprehend how planning for OCS (Operational Contracting Support) across the joint functions supports managing the effects contracting and contracted support have on the operational environment.
- e. Comprehend the integration of IO and cyberspace operations with other lines of operation at the operational level.
- f. Comprehend the roles that factors such as geopolitics, geo-strategy, society, region, culture / diversity, and religion play in shaping planning and execution of joint force operations across the range of military operations, to include traditional and irregular warfare.
- g. Comprehend the role and perspective of the combatant commander and staff in developing various theater policies, strategies, and plans.
- h. Comprehend the requirements across the joint force, Services, inter-organizational partners and the host nation in planning and execution of joint operations across the range of military operations.

Learning Area 5 Joint Command and Control

- a. Comprehend the organizational options, structures and requirements available to joint force commanders.
- b. Comprehend the factors of intent through trust, empowerment, and understanding (Mission Command), mission objectives, forces, and capabilities that support the selection of a specific C2 option.
- c. Comprehend the effects of networks and cyberspace on the ability to conduct Joint Operational Command and Control.

Learning Area 6 Joint Operational Leadership and the Profession of Arms

- a. Comprehend the role of the profession of arms in the contemporary environment.
- b. Comprehend critical thinking and decision-making skills needed to anticipate and recognize change, lead transitions, and anticipate/adapt to surprise and uncertainty.
- c. Comprehend the ethical dimension of operational leadership and the challenges that it may present when considering the Profession of Arms.
- d. Analyze the application of mission command (intent through trust, empowerment, and understanding) in a Joint, Interagency, Intergovernmental, and Multinational (JIIM) environment.
- e. Communicate with clarity and precision.
- f. Analyze the importance of adaptation and innovation on military planning and operations.

Additional Qualification Designation (AQD) Code Qualification. Since 16 May 2007, the United States Navy awards an Additional Qualifying Designator (AQD) code of Joint Operational Planner (JPN) for all U. S. Navy (11XX, 12XX, 13XX, 16XX and 31XX designators) who graduate from the resident College of Naval Command and Staff Joint Professional Military Education (JPME I) course.

5. Course Organization

After the introductory lecture and seminar and the research paper discussion, the syllabus begins building the intellectual foundation necessary for success at the upper tactical and lower operational levels of war. The introductory sessions focus on the opportunities and challenges ahead and introduce students to the themes, outcomes, and general requirements of the JMO trimester. Students next examine the building blocks of a navy—surface, subsurface, and air—in order to begin to understand how navies fight. In this block, entitled *Naval Tactics and Capabilities*, students will be exposed to basic tactical considerations and the capabilities and roles of various naval platforms, weapons, and sensors in order to have a general idea of what we are addressing in the following sections. This portion of the syllabus ends with an open-ended tabletop exercise that allows the students to (a) demonstrate understanding of the material presented thus far and (b) to organize naval forces creatively. The objectives of the *Naval Tactics and Capabilities* sessions include:

- Recognizing the general capabilities of naval forces.
- Understanding the differences between single arm and combined arms naval operations.
- Describing single arm naval tactics for surface, submarine, and naval air assets.
- Demonstrating an understanding of tactics and capabilities of naval forces through an aggregation/disaggregation of forces in a fictional scenario.

Next, a study of *Joint Operational Warfare* embodied in operational art prepares students to examine the entire spectrum of joint warfighting by introducing a theoretical framework and then applying that framework at the upper tactical and operational levels of war. Operational Art and Naval Warfare, both examined as theory, present the best practices

of the past and serve as a milepost in understanding military problems of today. Our *Joint Operational Warfare* and the following *Naval Warfare Theory* sessions therefore, do not follow what many are accustomed to vis-à-vis scientific theory—idea, test, replicate, and then create law. Students will discover that there are very few, if any, laws in the art of war. The final session of this block presents students with an in-depth look at current and service doctrine. Armed with the theory that provides the foundation for modern doctrine, students will critically analyze that doctrine given their understanding of operational art. The Objectives for the *Joint Operational Warfare* sessions include:

- Comprehending operational art as a body of theory, including its historical roots.
- Applying operational art in the analysis of historical case studies involving ill-structured problems.

In the Spruance Course's unique *Naval Warfare Theory* sessions that follow, students are introduced to the maritime domain in the context of proven theory, and discussions will focus on the theory and practice of mid- to high-intensity warfare at sea. By theory we mean the experiences—both successful and unsuccessful—of those practitioners who have gone before. The *Naval Warfare Theory* seminars expand on the theoretical foundations we explored in *Joint Operational Warfare* and prepare students for the practical sessions that follow. These sessions conclude with another Tabletop exercise in which students will study a historical case study and evaluate the employment of combined naval arms. This study of theory as a whole culminates with an examination that covers selected aspects of the theory we have discussed thus far and is an opportunity for the student to (a) demonstrate mastery of the theoretical underpinnings of warfare, and (b) serve as a vehicle to demonstrate higher order thinking skills. The objectives for these seminars include:

- Reinforcing theoretical concepts through an appreciation of maritime warfare.
- Understanding the theory and practice of tactical and operational warfare at sea.

Following the first written examination, an introduction to *International Operational Law* will emphasize familiarity with specific aspects of the law with an eye toward using it to assist planners in meeting assigned objectives. These sessions are intended to address the following objectives:

- Comprehending and applying operational law concepts in order to understand international law as it relates to maritime operations.
- Identifying operational law-related constraints and restraints on potential courses of action.

Once students have grasped the fundamental theoretical underpinnings of military actions and the nexus of operational law and warfighting theory, we will investigate how each of the services is employed in combat, with emphasis on the naval services. The *Services, Their Doctrine, and Functions* sessions signify the cognitive transition from the theoretical to the practical. As discerned during our critique of modern doctrine in an earlier session, one may only truly understand doctrine after an in-depth examination of the theory

that informs it. Building on this foundation, students will examine the critical areas of naval command and control, logistics and deployment, intelligence, information operations and cyberspace, how conflicts are terminated, and lastly a brief look at stability operations. Completion of these sessions provides the doctrinal and practical foundation necessary to address U. S. military considerations for operations in the contemporary environment and to support detailed Joint and Service planning events. The final session is a two-day open-ended table top exercise involving a fictional clash between the United States and a near-peer competitor. Students will be required to display an understanding of the theoretical concepts discussed thus far as well as present creative solutions to potentially real-world problems against that near-peer competitor. These sessions are expected to satisfy the following objectives:

- Describe the organization and employment considerations of Fleet assets.
- Broadly describe other service capabilities and recognize the differences in service doctrine.
- Explain operational functions in practice as opposed to theory.
- Identify the relationship between conflict termination and stability operations.
- Consider an operational idea to resolve a fictional scenario against a near-peer competitor.

Successfully prosecuting a modern war requires more than technical competence in the military domain and effective operational concepts. In the seminars that make up the *Operational Decision Making and Military Planning* portion of the course, we move deeper into the practical and discuss the Logic of the Commanders Estimate and the language of problem solving. Using the knowledge gained in previous sessions, students are next introduced to additional skills that develop a broader understanding of the complexity of military operations. Orders development provides an overview of how we convert the critical and creative thinking in a planning group into tangible products for others to execute. The development of an operations order, stressing the detailed requirements associated with writing the order, will be accomplished during our first major exercise. The first exercise is a multi-day, detailed planning exercise in which students will craft an operations order intended to gain and maintain sea control against a fictional Anti-Access, Area Denied (A2AD) environment in and around Borneo. Students will apply the Navy Planning Process (NPP) to develop that operations order. The objectives for this first exercise include:

- Understanding the difference between complex and complicated problems and the approaches needed to resolve them.
- Using the Navy Planning Process (NPP) to create orders that demonstrate mastery of JMO subject matter thus far.
- Creating an operations order that integrates the maritime force in time, space, and purpose to obtain naval objectives in support of the joint force.

This exercise is followed by an investigation of those things that a navy does when it is not involved in mid- to high-intensity combat—*Naval Operations Short of War*. Humanitarian assistance, combating piracy, peace operations, homeland security, and a

multi-day session on Small Wars will round out the operations short of war seminars and set the stage for the *Final Planning Exercise*. Objectives for these sessions include:

- Describing the roles of a navy when not engaged in mid-to high intensity combat.
- Discussing how a navy can support operations short of war.
- Distinguishing the unique requirements of naval forces in operations short of war.

At the conclusion of these sessions, the final multi-day planning exercise using the Joint Operation Planning Process (JOPP) and the previously developed Operations Order will exercise our order against a thinking enemy. The *War at Sea*, a joint planning exercise, will utilize the previously developed Operations Order for the struggle for sea control and will be supported by the College's War Gaming Department. The War gaming Department will adjudicate the order, requiring students to quickly reassess and plan accordingly. This school-house 'reset' allows students to refine their operational designs without the cost of losing service members and machines to enemy action and is an essential element in an active educational process. Students will note that the exercise pits the United States against an exceptionally robust enemy force requiring not only a theoretically sound approach, but also a creative approach. Simple use of force is insufficient to defeat the threat. We will combine two seminars into an Operational Planning Team (OPT) and using the JOPES Crisis Action Planning process, coupled with critical and creative thought; resolve a scenario that involves the projection of joint power. The final scenario provides all students the opportunity to interact with the media and to develop and present briefings to senior leadership. The final exercise will reinforce many of the concepts studied throughout the trimester. The objectives of the *War at Sea* exercise are to:

- Apply the Joint Operation Planning Process (JOPP) to develop a military solution to an ill-structured problem.
- Explain the challenges and responsibilities of members of an Operational Planning Team.
- Synthesize the concepts of operational art, service and joint doctrine, operational law, and operational planning by developing an operations order that accomplishes an assigned mission.
- Brief joint orders to senior decision makers.

6. Syllabus Organization

The syllabus establishes the basis for required course work and serves as an intellectual roadmap for the trimester. In each session, the *Focus* specifies the general context of the topic. Next, the *Objectives* section cites the specific session goals and provides an intellectual line of departure for the readings. The *Background* section provides assistance in framing the individual session and how it fits into the course flow. The *Discussion Topics* section is designed to generate critical thinking and is the foundation for seminar discussion. The questions serve to focus the student as he or she reads through the assigned readings. They also provide a review at the completion of the readings to insure the student comprehends the essence of the session. Prior understanding of the questions is critical for effective reading. The *Products* section identifies those items that may be produced in

fulfillment of the session objectives. The *Readings* section provides a foundation for student preparation and enhances understanding of the topic.

The Joint Maritime Operations Trimester fulfills the majority of the Joint Professional Military Education (JPME) Phase I requirements established by the Chairman, Joint Chiefs of Staff in the OPMEP guidance. The objectives identified in each session reflect these requirements. The remaining JPME Phase I requirements are fulfilled in the National Security Affairs (NSA) and Strategy and Policy (S&P) Departments' courses (TSDM and S&W) and selected electives.

7. Methods of Instruction

The Socratic Method. The seminar is the fundamental learning forum for this course with student expertise being a significant part of the learning process. For a seminar to succeed there must be open and candid sharing of ideas and experiences, tempered with necessary military decorum. Students will find that even the most unconventional idea may have some merit. Successful seminars—that is, seminars whose members leave with the greatest knowledge and personal satisfaction—are those made up of students who come to each session equipped with questions based on thorough preparation. These questions build upon the assigned questions and are generated through a combination of reading, experience, and thinking through the material. Most students leave the seminar with new insights or even more thought-provoking questions. Student preparation, free and open discussion, and the open-minded consideration of other students' ideas, all contribute to a valuable seminar experience. The “one-third” rule is the keystone of the seminar approach. The first third is a well-constructed, relevant curriculum. The second third is a quality JMO faculty to present the material and guide the discussion, and the most important third is the participation of the individual students. At the College of Naval Command and Staff and Naval Staff College, students are responsible for their own education. Only by thoroughly preparing for seminar sessions can students become active catalysts who generate positive and proactive seminar interaction and refine critical and creative thinking skills.

The Case Study Method. This method of instruction is used to provide intellectual stimulation for students and is designed to develop student abilities to analyze and solve problems using the knowledge, concepts, and skills honed during the trimester. A concomitant benefit of the case study is to deepen the experiential pool in students through analysis of past great captains of war or to expand the knowledge of a specific geographic area. Some of the cases and problems stress individual effort and planning, while others require a team or staff approach. Cases may consist of historical events, analyzed for tactical or operational purposes, or fictional crisis situations that demonstrate the application of concepts such as presence, deterrence, international law, rules of engagement, and self-defense. Case studies sometimes will be narrowly focused to illustrate a specific point and potential force capabilities and limitations or to highlight explicit concepts involving an aspect of tactical or operational warfare. Seminars are often split into smaller groups or teams to prepare solutions and responses. The Case study method is active learning, meaning that it allows students to achieve a higher level of learning while providing students with many more data points relevant to problem solving in the volatile, uncertain, complex, and

ambiguous environment in which they will operate. Students will be tasked with analyzing the case study material, synthesizing information, and evaluating recommended courses of action that they create.

The Lecture-Seminar Method. To share equally the vast experience of some of our faculty members and guest speakers, lectures are often followed by seminar discussion. Students are encouraged to analyze critically the information presented by speakers and engage actively in post-speaker seminar discussions. JMO lectures are intended to generate questions that the students may discuss in seminar and are not intended as merely the transmission of knowledge.

The Practical Exercise Method. The opportunity for students to apply information presented in the various sessions is important. Practical exercises allow students time to analyze information critically in order to develop viable solutions to ill-structured problems. Students may be assigned to practical exercise as individuals, small groups, seminar, or even multiple seminars. This active learning method reinforces multiple concepts and should be fully embraced.

8. Readings

All JMO course sessions are supported by various readings. The purpose of these readings is to assist in understanding the many aspects of the topics being presented and often, to provide divergent points of view on the same topic. For the most part, the readings are intended to convey to the student basic information, the mastery of which will facilitate in-class discussions. Many of the readings provide point-counterpoint and are intended to foster discussion. The readings serve as a line of departure for seminar discussion and are not intended solely as drivers of discussion. They are the raw material from which we will build our understanding of various topics. Students are reminded, however, that as critical thinkers, all readings should be questioned concerning their relationship to the topic, to other readings, and to the personal experience of the student. While the vast majority of assigned readings have been digitized and loaded on student iPads, some readings, due to their value as reference material, are issued. A thorough understanding of the following information will significantly assist the student in using the course readings to best advantage:

(a) Categories of Readings. Each syllabus session lists categories of readings.

(1) *Required readings* are those that must be read prior to the session. Often seminar moderators will offer additional guidance on the priority of the readings, based on the special needs of the individual seminar or recommend scanning a particular reading for broad content or as a refresher. The required readings include video presentations of selected lectures that students are expected to critically consume and come prepared to discuss in the following days seminar.

(2) *Supplementary readings* are those relevant to a session topic that may be useful to a student seeking more information in order to gain insight beyond that provided by the

Required Readings; this includes additional background material on case studies and exercises. On occasion, faculty moderators may assign Supplementary Readings to individual students to read and provide oral synopses to the seminar in support of topic discussion. Supplementary readings also provide additional sources for student research in support of the JMO Research paper requirement.

(b) Reading Identifiers. Each reading that is not a complete book or publication is identified through a four-digit reading identifier (e.g., **NWC 1002**). This number is often used instead of the title, but in either event, the readings are located on the JMO Blackboard website and have been uploaded on your iPad under the specific session.

(c) Finding Specific Readings. Readings for any specific session may be located as follows:

- (1) Required Readings are provided electronically or annotated as (*Issued*). Issued means that the readings may be found in the JMO reading material issued in hard copy
- (2) Supplementary readings and Library Reserve readings, are not issued. These readings are frequently available in the Henry E. Eccles Library and may assist students in further research on a topic that interests them and often forms an embryonic bibliography of the research paper

IMPORTANT NOTE: Students are cautioned that classified readings and documents must be read on the premises of the Naval War College. Ensure such materials are properly safeguarded at all times. Do not leave the materials unattended. Students are not provided with classified material storage containers (safes); it is therefore necessary to check out and return classified material on a daily basis. Faculty moderators will provide additional information as required during the JMO trimester. Ensure that for any classified sessions or lectures you do not bring your iPads, cell phones, or other wireless devices to class.

(d) Management of Reading Load. The amount of preparatory reading required for each session depends on a variety of factors, including topic complexity, session objectives, and the course schedule. The typical weekly reading requirements are on the order of 300 to 400 pages. This syllabus is a powerful tool in that it allows students to develop a personal plan of study that leads to better time management and a deeper understanding of the syllabus material.

It is recommended that students review session reading requirements at least a week ahead of time in order to plan preparation time regressively and accurately and ensure that all necessary readings are on hand.

9. JMO Research Paper

The JMO Research Paper presents the opportunity to study an upper tactical, operational, or in some cases, theater-strategic level issue, conduct research and analysis, and prepare a paper that advances the literature and expands the body of knowledge. Purely strategic or lower tactical level research papers are not appropriate for this research requirement. The research paper is a chance for students to address a real-world topic that they personally feel is of value. This assignment requires independent thought and graduate-level writing; the final product must be a 14-17 page paper suitable for publication in a professional journal. The amount and depth of research should be adequate to support the student's thesis, and sufficiently justify the conclusions and recommendations. Another use of the paper may be to provide a source of innovative thinking to the Service and Joint staffs involved with the many issues bearing on employment of forces.

Numerous combatant and headquarters commands actively solicit papers and monographs on topics of current interest to them. The Naval War College is frequently canvassed for papers on particular subjects, and requested to generate interest in specific areas for research and writing to support requesting commands. Students are encouraged to submit their research papers for the Naval War College Prize Competition as described in the Naval War College *Student Handbook* and posted on the JMO Blackboard Website. Amplifying information and guidance on the selection and execution of a successful JMO Research Paper project is provided in **NWC 2062**. Your moderators will answer questions and otherwise assist you in this most important intellectual undertaking during the introductory seminars and student tutorials in February and March.

10. Plagiarism, Misrepresentation, and Cheating

Student attention is directed to the Naval War College 2013 Faculty Handbook which discusses the academic honor code and specifically prohibits plagiarism, cheating, and misrepresentation. The Naval War College diligently enforces a strict academic code requiring authors to credit properly the source of materials directly cited to any written work submitted in fulfillment of diploma/degree requirements. Simply put: plagiarism is prohibited. Likewise, this academic code prohibits cheating, and the misrepresentation of a paper as an author's original thought. Plagiarism, cheating and misrepresentation are inconsistent with the professional standards required of all military personnel and government employees. Furthermore, in the case of U. S. military officers, such conduct clearly violates the "Exemplary Conduct Standards" delineated in Title 10, U. S. Code, Sections 3583 (U. S. Army), 5947 (U. S. Naval Service), and 8583 (U. S. Air Force).

Plagiarism is the use of someone else's work without giving proper credit to the author or creator of the work. It is passing off as one's own another's words, ideas, analysis, or other products. Whether intentional or unintentional, plagiarism is a serious violation of academic integrity and will be treated as such by the command. Plagiarism includes but is not limited to the following actions.

- a. The verbatim use of others' words without both quotation marks (or block quotation) and citation.
- b. The paraphrasing of others' words or ideas without citation.
- c. Any use of others' work (other than facts that are widely accepted as common knowledge) found in books, journals, newspapers, websites, interviews, government documents, course materials, lecture notes, films, and so forth without giving credit.

Authors are expected to give full credit in their written submissions when using another's words or ideas. Such use, with proper attribution, is not prohibited by this code. However, a substantially borrowed but attributed paper may lack the originality expected of graduate-level work; submission of such a paper may merit a low or failing grade, but is not plagiarism.

Cheating is defined as the giving, receiving, or using of unauthorized aid in support of one's own efforts, or the efforts of another student. (Note: NWC Reference Librarians are an authorized source of aid in the preparation of class assignments but not on exams). Cheating includes the following:

- a. Gaining unauthorized access to exams.
- b. Assisting or receiving assistance from other students or other individuals in the preparation of written assignments or during tests (unless specifically permitted).
- c. Using unauthorized materials (notes, texts, crib sheets, and the like, in paper or electronic form) during tests.

Misrepresentation is defined as reusing a single paper for more than one purpose without permission or acknowledgement. Misrepresentation includes the following:

- a. Submitting a single paper or substantially the same paper for more than one course at the NWC without permission of the instructors.
- b. Submitting a paper or substantially the same paper previously prepared for some other purpose outside the NWC without acknowledging that it is an earlier work.

11. Requirements

Students are expected to prepare fully for each seminar and to participate in classroom discussions and exercises.

Your principal duty during this academic year is to read, to study, to reflect, and to sharpen your critical and creative thinking skills.

A tough-minded, questioning attitude and a willingness to enter into rigorous but disciplined discourse are central to the success of the course. An officer's ability to engage positively and productively in deliberations and formulate advice is integral to sound operational decision making. Moderators evaluate seminar contributions with regard to one's

skills in persuading peers and seniors because persuasive leadership is critical to an officer's continued success. Moderators evaluate written products because they represent one's ability to synthesize and organize information in a coherent manner, applying analytical frameworks and critical thinking. Seminar work and written products are also used to demonstrate the level of subject mastery achieved by individual students and indirectly the effectiveness of the faculty and course material. Students are expected to improve both their written and verbal skills throughout their NWC experience.

(a) Workload. Some peaks in the workload will occur. Advance planning and careful allocation of time will help mitigate these peaks. This is particularly true of the JMO Research Paper.

This is a Master's Degree awarding course of study that confers that degree after only one year of exceptionally rigorous study. Expect, therefore, to commit significant time to reading and as importantly, to reflection. Student experience indicates that the total course requirements will involve a weekly average workload of about 12-18 hours of in-class and 25-30 hours of out-of-class work. Additionally, students should expect to dedicate 80-100 hours in researching, drafting, and producing an acceptable graduate level research paper.

Time management is a critical aspect of a student's success in mastering the multiple requirements of the Joint Maritime Operations course. This syllabus is a powerful tool in that it allows students to develop a personal plan of study that leads to better time management and a deeper understanding of the course material.

(b) Oral and Written Requirements. The JMO Department has oral and written requirements that provide the opportunity for the student to demonstrate synthesis and progress. In addition, these requirements serve as a means for feedback and interaction between the faculty and members of the seminar. Not all requirements are graded, but each provides the student with some measure of how the student is doing at that point in the course. To accomplish the JMO curriculum successfully, students must complete the below requirements. The following is a composite listing of these course requirements, type of activity, relative weights, and the key dates of graded events:

Requirement	Type Effort	Weight	Date
Exam #1	Written/Individual	20%	28-29 March
Exam #2	Written/Individual	20%	25-27 May
JMO Research Paper	Written/Individual	35%	13 May
Seminar Contribution	Daily Assessment	25%	19 Feb – 10 June

12. JMO Department Grading Criteria

A course average grade of B- or higher is required for successful completion of Master's degree requirements. A minimum grade of C- is required for successful completion of the JMO course and receipt of JPME Phase I certification. Any assigned grade may be appealed in writing within seven calendar days after receiving the grade. Grades will be appealed first to the student's seminar senior moderator and then to the Department Chairman. If deemed necessary, the Chairman may assign an additional grader who will review the assignment and provide an independent grade. Grade appeals may ultimately be taken to the Dean of Academic Affairs, whose decision will be final. Note that the review may sustain, lower, or raise the grade. The Academic Coordinator (Room C-417) can assist in preparing an appeal.

Late or Incomplete Work. Per the current version of Naval War College Instruction 1520.2, *Examination and Grading Policy*, student work that is not completed will receive a numeric grade of zero. Unexcused tardy student work, that is work turned in past the deadline without previous permission by the moderator, will receive a grade not to exceed C+, depending on the quality of the work. This means that if a student submits work that if turned in on time would have earned a grade of A+, it will receive a grade of C+. Likewise, if the late work would have earned a grade of B+, the grade will be a D+.

Student work determined to be in violation of the honor code will receive a grade of F. The College's Academic Integrity Committee will assign an accompanying numeric grade to the F. Although it may not be applicable to all cases, a grade of zero will be assigned as a matter of practice. Three sets of general grading criteria help in the determination of the grades that will be assigned during the JMO trimester. The criteria below offer the student the standards and requirements by which faculty assess performance. Using current Naval War College guidance, the procedures below amplify the criteria as established within the Joint Military Operations Department.

a. Grading criteria for the JMO Research Paper:

The JMO Research Paper must have a valid thesis, provide sufficient background research to analyze the thesis, present a strong argument for the thesis, reflect consideration of conflicting points of view present logical conclusions drawn from the material presented, and provide recommendations or lessons learned based on the conclusions. Certain research papers, because of the nature of the assigned research question, may follow a slightly different flow. Students are reminded that their moderators serve as their research paper advisors and different methodologies will be approved by the moderator team. In addition to the examples of substantive criteria specified below, the paper must be editorially correct (spelling, punctuation, grammar, syntax, format, and so forth). The research paper represents the physical manifestation of your thinking. As such, all research papers are evaluated on how well the student presents his or her ideas.

A+ (97-100): Offers a genuinely new understanding of the subject. Especially deserving of distribution to appropriate authorities and submission for prize competition. Thesis is definitive, research is extensive, subject is treated completely, and the conclusions and recommendations are logical and justified.

A (94-<97): Work of superior quality that demonstrates a high degree of original thought. Suitable for distribution and submission for prize competition. Should be retained in the Defense Technical Information Center (DTIC). Thesis is clearly articulated and focused, research is significant and arguments are comprehensive, and conclusions and recommendations are supported.

A- (90-<94): Above the average expected of graduate work. Contains original thought. Thesis is clearly defined, research is purposeful, arguments are presented, conclusions and recommendations are valid.

B+ (87-<90): A solid paper. Above the average of graduate work. Thesis is articulated, research has strong points, subject is well-presented and constructed, and conclusions and recommendations are substantiated by the material.

B (84-<87): Average graduate-level performance. Thesis is presented, research is appropriate for the majority of the subject, analysis of the subject is valid with minor omissions and conclusions and recommendations are presented with few inconsistencies.

B- (80-<84): Below the average graduate-level performance. Thesis is presented, but the research does not fully support it; the analysis, conclusions, and recommendations are not fully developed. The paper may not be balanced and the logic may be flawed.

C+ (77-<80): Below the standards required of graduate work. Portions of the criteria are lacking or missing, the thesis may be unclear, research may be inadequate, analysis may be incomplete, and the conclusions and recommendations may be lacking or not supported by the material.

C (74-<77): Fails to meet the standards of graduate work. Thesis is present, but support, analysis, conclusions, and recommendations are either missing or illogically presented. Paper has significant flaws in construction and development.

C- (70-<74): Well below standards. Thesis poorly stated with minimal evidence of research and/or several missing requirements. Subject is presented in an incoherent manner that does not warrant serious consideration.

D+ (67-<70) Considerably below graduate-level performance and lacking in any evidence

D (64-<67) of effort or understanding of the subject matter. In some measures, fails to

D- (60-<64) address the thesis, argument or counter-argument.

F (0–<60): Fails to meet graduate-level standards. Unsatisfactory work. Paper has no thesis. Paper has significant flaws in respect to structure, grammar, and logic. Paper displays an apparent lack of effort to achieve the course requirements. Gross errors in construction and development detract from readability of the paper. Paper displays evidence of plagiarism or misrepresentation.

b. Grading criteria for Examinations:

Spruance Course examinations usually focus on an historic case study (ies). Moderators will provide read ahead material in advance of the exam date. Expect the examination questions to be sourced from *any* of the course material presented to date in seminar. Response to the examination will be in essay format. Grading will be assessed using the following criteria:

A+ (97-100): Organized, coherent and well-written response. Completely addresses the question. Covers all applicable major and key minor points. Demonstrates total grasp and comprehension of the topic.

A (94-<97): Demonstrates an excellent grasp of the topic, addressing all major issues and key minor points. Organized, coherent, and well-written.

A- (90-<94): Above the average expected of graduate work. Demonstrates a very good grasp of the topic. Addresses all major and at least some minor points in a clear, coherent manner.

B+ (87-<90): Well-crafted answer that discusses all relevant important concepts with supporting rationale for analysis.

B (84-<87): Average graduate performance. A successful consideration of the topic overall, but either lacking depth or containing statements for which the supporting rationale is not sufficiently argued.

B- (80-<84): Addresses the question and demonstrates a fair understanding of the topic, but does not address all key concepts and is weak in rationale and clarity.

C+ (77-<80): Demonstrates some grasp of topic, but provides insufficient rationale for response and misses major elements or concepts. Does not merit graduate credit.

C (74-<77): Demonstrates poor understanding of the topic. Provides marginal support for response. Misses major elements or concepts.

C- (70-<72): Addresses the question, but does not provide sufficient discussion to demonstrate adequate understanding of the topic.

D+ (67-<70) Considerably below graduate-level performance and lacking in any evidence

D (64-<67) of effort or understanding of the subject matter. In some measures, fails to

D- (60-<64) address the entire question.

F (0-<60): Unsatisfactory work. Fails to address the questions or paper displays evidence of plagiarism or misrepresentation.

c. Grading criteria for Seminar Contribution:

The Seminar Contribution grade is determined by the moderators' evaluation of the quality of a student's contributions to seminar discussions, projects, and exercises and the demonstration of critical and creative thought. It is recognized that throughout the course many students will participate in areas for which they have no prior expertise. Additionally, some positions may have greater visibility. Consequently, each student will be evaluated on his/her preparation and contribution in each given role, taking into consideration the above factors. All students are expected to contribute to each seminar session, and to listen and respond respectfully when seminar-mates or moderators offer their ideas. This overall expectation underlies all criteria described below. While rare, interruptive, discourteous, disrespectful, or unprofessional conduct or attitude detracts from the overall learning experience and will negatively affect the contribution grade.

A (90-100) Level Contribution

A-level contribution demonstrates real achievement by a student in grasping what critical thinking is, along with the clear development of a range of specific critical thinking skills or abilities. The contributions during the course were, on the whole, clear, precise, and well-reasoned. Critical thinking terms and distinctions are used effectively. The work demonstrates a mind in charge of its own ideas, assumptions, biases, inferences, and intellectual processes. Often analyzed issues clearly and precisely, often formulated information clearly, usually distinguished the relevant from the irrelevant, often recognized key questionable assumptions, usually clarified key concepts effectively, typically used language in keeping with educated usage, frequently identified relevant competing points of view, and shows a general tendency to reason carefully from clearly stated premises, as well as noticeable sensitivity to important implications and consequences. Generally displayed excellent reasoning and problem-solving skills. The A student's work is consistently at a high level of intellectual excellence.

A+ (97-100): Peerless demonstration of wholly thorough preparation for individual seminar sessions. Consistently contributes original and highly insightful thought. Exceptional team player and leader.

A (94-<97): Superior demonstration of complete preparation for individual sessions. Frequently offers original and well thought-out insights. Routinely takes the lead to accomplish team projects.

A- (90-<94): Excellent demonstration of preparation for individual sessions. Contributes original, well-developed insights in the majority of seminar sessions. Often takes the lead to accomplish team projects.

B (80-89) Level Contribution

B-level work represents demonstrable achievement in grasping what critical thinking is, along with the clear demonstration of a range of specific critical thinking skills or abilities. Demonstrates, on the whole, clear, precise, and well-reasoned thought. Critical thinking terms and distinctions are used frequently. The contributions demonstrate a mind beginning to take charge of its own ideas, assumptions, inferences, biases, and intellectual processes. Generally, analyzed issues clearly and precisely, often formulated information clearly, usually distinguished the relevant from the irrelevant, often recognized key questionable assumptions, usually clarified key concepts effectively, typically used language in keeping with educated usage, frequently identified relevant competing points of view, and showed a general tendency to reason carefully from clearly stated premises, as well as noticeable sensitivity to important implications and consequences. B-level work displays good reasoning and problem-solving skills.

B+ (87-<90): Above-average graduate level preparation for seminar sessions. Occasionally contributes original and well-developed insights. Obvious team player who sometimes takes the lead for team projects.

B (84-<87): Average graduate level preparation for individual sessions. Occasionally contributes original and insightful thought. Acceptable team player; takes effective lead on team projects when assigned.

B- (80-<84): Minimally acceptable graduate level preparation for individual sessions. Infrequently contributes well-developed insights; may sometimes speak out without having thought through an issue. Requires prodding to take lead on team projects.

C (70-79) Level Contribution

C-level work illustrates some but inconsistent achievement in grasping what critical thinking is, along with the development of modest critical thinking skills or abilities. C-level contributions show some emerging critical thinking skills, but also pronounced weaknesses as well. Though some contributions are reasonably well considered, others are poorly done, or at best are mediocre. There are more than occasional lapses in reasoning. Though critical thinking terms and distinctions are sometimes used effectively, sometimes they are used quite ineffectively. Only on occasion does C-level work display a mind taking charge of its own ideas, assumptions, inferences, and intellectual processes. Only occasionally does C-level work display intellectual discipline and clarity. The C-level student only occasionally analyzes issues clearly and precisely, formulates information clearly, distinguishes the relevant from the irrelevant, recognizes key questionable assumptions, clarifies key concepts effectively, uses language in keeping with educated

usage, identifies relevant competing points of view, and reasons carefully from clearly stated premises, or recognizes important implications and consequences. Sometimes the C-level student seems to be simply going through the motions of the assignment, carrying out the form without getting into the spirit of it. On the whole, C-level work shows only modest and inconsistent reasoning and problem-solving skills and sometimes displays weak reasoning and problem-solving skills.

C+ (77-<80): Generally prepared, but not to minimum acceptable graduate level. Requires encouragement to contribute to discussions; contributions do not include original thinking or insights. Routinely allows others to take the lead in team projects.

C (74-<77): Preparation for individual sessions is only displayed when student is called upon to contribute. Elicited contributions reflect at best a basic understanding of session material. Consistently requires encouragement or prodding to take on fair share of team project workload. Only occasionally engages in seminar dialogue with peers and moderators.

C- (70-<74): Barely acceptable preparation. Contributions are extremely limited, rarely voluntary, and reflect minimal grasp of session material. Displays little interest in contributing to team projects.

D (60-69) Level Contribution

D-level work shows only a minimal level of understanding of what critical thinking is, along with the development of some, but very little, critical thinking skills or abilities. D level contribution at the end of the trimester, on the whole, shows only occasional critical thinking skills, but frequent uncritical thinking. Most contributions are poorly presented and not supported logically. There is little evidence that the student is "reasoning" through the discussion. Often the student seems to be merely going through the motions of the assignment, carrying out the form without getting into the spirit of it. D-level work rarely shows any effort to take charge of ideas, assumptions, inferences, and intellectual processes. In D-level work, the student rarely analyzes issues clearly and precisely, almost never formulates information clearly, rarely distinguishes the relevant from the irrelevant, rarely recognizes key questionable assumptions, almost never clarifies key concepts effectively, frequently fails to use language in keeping with educated usage, only rarely identifies relevant competing points of view, and almost never reasons carefully from clearly stated premises, or recognizes important implications and consequences. D-level work does not show good reasoning and problem-solving skills and frequently displays poor reasoning and problem-solving skills. In general, D-level thinking lacks discipline and clarity.

D+ (67-<70) Rarely prepared or engaged. Contributions are uncommon and reflect

D (64-<67) below-minimum acceptable understanding of lesson material. Engages in

D- (60-<64) frequent fact-free conversation. (Unsubstantiated claims and fallacious reasoning).

F (Below 59) Level Contribution

While exceptionally rare at the Naval War College, for that student who receives an F, the student does not understand the basic nature of critical thinking, and in any case does not display the critical thinking skills and abilities which are at the heart of this course. The contributions made during the course are vague, imprecise, and unreasoned. There is little evidence that the student is genuinely engaged in the task of taking charge of his or her thinking. Many contributions appear to have been done pro forma, with the student simply going through the motions without really putting any significant effort into thinking his or her way through them. Consequently, the student is not analyzing issues clearly, not formulating information clearly, not accurately distinguishing the relevant from the irrelevant, not identifying key questionable assumptions, not clarifying key concepts, not identifying relevant competing points of view, not reasoning carefully from clearly stated premises, or tracing implications and consequences. The student's work does not display discernable reasoning and problem-solving skills and did not take corrective actions as recommended by his or her moderator.

F (0–60): Unacceptable preparation. Displays no interest in contributing to team projects; cannot be relied on to accomplish assigned project work. At times may be seen by peers as disruptive.

13. Seminar Assignments

The principal criteria in assigning students to a seminar is a balanced distribution among services and agencies, as well as student and moderator specialties and operational expertise. Typically, two faculty members are assigned to each seminar. Student seminar, classroom, and faculty assignments are published separately.

14. Schedule

Seminars usually meet in the morning; there are, however, several afternoon seminars scheduled. Depending on the work assigned, you may meet for scheduled periods in seminar as a group, in smaller teams depending on tasking, or individually to conduct study and research. Please pay close attention to the start times for each event since they vary throughout the trimester. Classes normally are scheduled for 0830–1145. If class is scheduled in the afternoon, the normal timeframe is 1300–1630. Moderators may adjust these times to facilitate the learning objectives for each segment of instruction. A course-planning schedule containing meeting dates and times is provided in the addenda to this syllabus. A course planning schedule containing meeting dates and times is provided on the JMO Blackboard Website. Changes from this schedule will be captured in the weekly schedules available electronically to students.

15. Key Personnel

If you require additional information on the course, or if problems develop that cannot be resolved with your moderators, you may contact the Departmental Chairman via his executive assistant. The key departmental personnel are:

Chairman.....	CAPT Richard LaBranche, USN Room C-421, 841-3556
Executive Assistant.....	PROF F. B. Horne, (USN (Ret)) Room C-420A, 841-6458
Academic Coordinator.....	Ms. Susan Soderlund Room C-417, 841-4120
Joint Maritime Operations Course Coordinator.....	PROF Bill Hartig, (USMC (Ret)) Room C-428, 841-6470
Naval Tactics and Capabilities.....	CAPT Fred Turner, (USN) Room C-402, 841-6419
Joint Operational Warfare.....	PROF Doug Hime, (USAF (Ret)) Room C-423, 841-6463
Naval Warfare Theory.....	PROF S. Forand, (USMC (Ret)) Room C-407, 841-6570
Maritime Operational Law.....	CAPT Rob Sanders, (USN) Room C-424, 841-4644
The Services, Doctrine, and Functions.....	COL Greg Bell, (USA) Room C-408, 841-6475
Operational Decision Making and Planning.....	PROF Michael McGauvran, (USAF (Ret)) Room C-414, 841- 6564
Naval Operations Short of War.....	PROF E. J. Shaw, (USCG (Ret)) Room C-425, 841-6467
Final Planning Exercise.....	PROF J. Gannon, (USMC (Ret)) Room, C-421, 841-6480

16. Faculty Assistance

Faculty members are your mentors and are available to assist students with course material, to review a student's progress, and to provide counseling as required. Accordingly, students are expected to utilize this resource to the maximum extent that moderators can support. Students with individual concerns are encouraged to discuss them as early as possible so that moderators can render assistance in a timely manner. Students are strongly urged to make use of this non-classroom time with the faculty. During tutorials, scheduled in conjunction with JMO Research Paper proposal review, moderators may take the opportunity to discuss student progress as well as to solicit student input on the course to date. The bulk of the JMO faculty is located on the fourth deck of Connolly Hall and is available to assist as needed.

17. Student Critiques

The Joint Military Operations Department strives continually to improve this course. To assist in this goal, students are required to complete a confidential end-of-course questionnaire that is submitted electronically. Students are strongly encouraged to suggest improvements immediately and not to wait until the end-of-course questionnaire. The course questionnaire is designed to allow students to comment constructively on the trimesters content, pacing, reading loads, and so forth. It is not intended as a 'gripe sheet' but rather seeks student input to improve the course for the following year's students. As such, students are strongly encouraged to maintain this questionnaire as if it were a diary. It is much easier capturing your thoughts when they are fresh rather than to try to recreate them at the end of the trimester. Your constructive comments will help ensure that the course remains relevant and vital in the years to come. The release of student grades is contingent on completion of the critique.

18. Lectures by Senior Military Leaders

Enrichment lectures by senior military leaders occur periodically during the course. Most of these presentations feature the chiefs of service or regional and functional combatant commanders. These speakers are invited to discuss views and ideas from their perspective as operational commanders, service chiefs, or as senior staff officers. The weekly academic schedule (CNC&S or NSC, as applicable) will specify the final date and time of each enrichment lecture. Last minute changes will be disseminated by the Dean of Students and/or seminar moderators. In order to gain the most benefit from these sessions, it is critical that students be prepared to ask penetrating questions of the guest lecturer.

19. Non-attribution policy

The College's educational mission requires a climate conducive to the free and open exchange of ideas and opinions by students, faculty and guest speakers. To this end and unless otherwise announced by the College or someone with authority to speak for the College, all lectures, seminars and similar academic or policy discussions (to include

conferences, workshops, roundtables, etc.) at the College are subject to the Chatham House Rule (CHR). The CHR states: “When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.”

To support this policy, no student, faculty, staff member, or guest of the College may, without express permission of the College, use any electronic device or other method to record any lecture, seminar or similar event at the College, whether live, streamed, stored on any NWC network or any removable storage device, or in any other manner.

The effect of the CHR is to separate statements from their source. For example, a student may not publically ask a guest lecturer a question prefaced by, “Last week General Clausewitz stated that . . .” Similarly, statements made by faculty or students in a seminar cannot be reported and attributed outside of the seminar. Thus students, faculty, or guests cannot claim orally, on a blog, or any other way, “Admiral Mahan is being hypocritical in advocating the use of mines, because in seminar he argued that they were inhumane.” Specific quotations are also to be avoided if they are likely to be traceable to specific individuals. A professor should not say, for example, “one of my [students from a demographic category in which we have a few] students said that while deployed....”

The CHR is relaxed in settings such as classroom discussions that are themselves subject to the Rule. Also, the use of quotations in academic papers, professional articles or other works is allowed when the author has secured the explicit permission of the source individual. These policies apply to all students, faculty, staff and visitors. They apply not only to events on the grounds of the College but also to the College of Distance Education, remote classrooms, seminar off-sites, and other meetings run by the College. The policies are designed to support the free exchange of ideas and opinion without fear of retaliation and to encourage visiting dignitaries to speak freely. They should encourage the discussion in both formal and informal settings of ideas and concepts central to an education in JPME at the Master’s Degree level. The policies do not protect an individual against improper speech, discussion or behavior.

20. Course Calendar

A course calendar is included at the end of the syllabus. Be forewarned that this calendar is subject to change. Changes will be announced by the Dean of Students and accessed through your Google email calendar function.

21. Faculty Biographies

Faculty Biographies are available in the digital version of this syllabus.

CHAIRMAN'S INTRODUCTORY REMARKS (Lecture)

Extraordinary as it may appear, the naval officer whose principal business is to fight is not taught the higher branches of his profession. The United States is not singular in this respect. The defect is common to nearly all navies and is an inheritance of a past and less enlightened age. But with the recent revolution in naval warfare comes a demand for a higher order of talent in the conduct of naval operations.

—Rear Admiral Stephen B. Luce, USN
First President of the U. S. Naval War College

A. Focus:

The Chairman of the Joint Military Operations Department, Captain Richard A. LaBranche, USN, will provide an overview of the objectives and requirements of the Raymond A. Spruance Course.

B. Objective:

- Understand the requirements and objectives of the upcoming trimester.

C. Background:

For the foreseeable future, the use of military power, together with the diplomatic, economic, and informational instruments of national power, will be essential in achieving national strategic objectives. During this trimester, you will study how to wield the military instrument of power effectively, in concert with the above mentioned instruments, to achieve operational and theater-strategic objectives. The emphasis, quite naturally, will be on the maritime domain. While many students arrive at the Naval War College flush with tactical knowledge and expertise, we will now open the intellectual aperture and examine higher levels of war, in this case, the operational level of war. Our focus will be on both naval operations at the Fleet level and joint operations at the Joint Force Commander level; however, the relationship between our national strategies and the actualization of the objectives enunciated in those various national strategies by Combatant Commanders will also be explored.

Most Master's Degree granting institutions require a significant amount of time invested by students in preparation, research, study, and reflection outside of the formal classroom. In these institutions, students are generally expected to devote between two and three hours in outside preparation time for each hour in seminar. The JMO Department has developed its curriculum in a manner in which, on average, students will devote between one

to two hours of outside preparation for every hour in seminar. Accordingly, for a ninety minute seminar, expect to budget up to three hours for reading, preparing, and reflecting on the material prior to discussion in seminar. The reason for this difference between purely academic institutions and the War College is that unlike most civilian institutions of higher learning, students attending the College of Naval Command and Staff and Naval Staff College are more mature and more experienced and have already demonstrated expertise in a given field. You will note that there are days blocked off as student reading and reflection time specifically to allow you to reflect on what you have learned thus far and to prepare for what is scheduled in the following week. The faculty recognizes that in order for the student to prepare himself/herself fully for the challenge of seminar participation, time must be dedicated to preparation. As we enter into our initial theoretical studies of Joint Maritime Operations, students are presented its purpose; to fully prepare U. S. and international military officers and civilian professionals to serve at the upper tactical and operational levels of war.

The point of contact for this session is Captain Richard LaBranche USN, C-421.

D. Discussion Topics:

None.

E. Products:

None.

F. Required Reading:

LaBranche, Richard A. Captain, USN. U. S. Naval War College, Joint Military Operations Department. *Expectations and Design*, 2016. Newport, RI: Naval War College, 2016. (NWC 4154).

U. S. Naval War College, Joint Military Operations Department. *Joint Maritime Operations (JMO) Syllabus and Study Guide*, 2016. Newport, RI: Naval War College, 2015. Read pages vii—xxx. (Issued).

_____. *Student Guide AY 2015*. Newport, RI: Naval War College, 2011. Review. (Issued).

G. Supplementary Reading:

None.

INTRODUCTORY SEMINAR (Seminar)

Always keep in mind the product which the country desperately needs is military leaders with the capability of solving complex problems and of executing their decisions. . . . You must keep your sights on problem solving as your objective.

—VADM Stansfield Turner, USN
President, U. S. Naval War College, 1972-1974

A. Focus:

This session is devoted to the introduction of seminar moderators and students, a review of the administrative requirements and procedures for the trimester, and the general ground rules of seminar conduct.

B. Objectives:

- Discover seminar member backgrounds and areas of expertise.
- Summarize seminar guidelines, expectations, and outcomes.
- Discuss the JMO syllabus, grading policy, reading requirements, schedule, critique, and student and faculty expectations.
- Discuss social and administrative matters and assign seminar responsibilities.

C. Background:

The introductory session provides the opportunity to meet your moderators and fellow seminar members. In preparation for the seminar, you will complete a short questionnaire that was provided by e-mail or put in your school mailbox. Completed questionnaires will be collected at the beginning of the introductory session.

1. **Course Requirements.** In addition to contribution to daily seminar discussions and practical exercises, written course requirements include the Operational Art essay exam, the Operations Research paper, and numerous other orders related tasks.
2. **Grading.** Grades will be based on the criteria specified in the JMO syllabus.
3. **Honor Code.** The academic honor code is discussed in the *Naval War College Student Handbook* and Academic Policy Statements; cheating, plagiarism, and misrepresentation are specifically prohibited.

The point of contact for this session is Professor Bill Hartig, C-428.

D. Discussion Topics:

None.

E. Products:

A completed student recall roster and a student billet assignment sheet.

F. Required Reading:

Familiarize yourself with: The Blackboard web site at:
<http://navalwarcollege.blackboard.com/>

Darlington, Roger. "How to Think Critically." *Roger Darlington's World*. April 2010.
(NWC 1059).

Richardson, John M. ADM. *A Design for Maintaining Maritime Superiority*. Washington, D.C.: Headquarters, Department of the Navy. January 2016. Read.

Turner, VADM Stansfield. Convocation Address (Edited), U. S. Naval War College, Newport, RI. 24 August 1972. (NWC 1121).

G. Supplementary Readings:

None.

THE JMO RESEARCH PAPER (Seminar)

A nation that makes a great distinction between its scholars and its warriors will have its laws made by cowards and its wars fought by fools.

—Thucydides

A. Focus:

This session addresses JMO research paper requirements, to include guidance on paper topics, research and writing, paper due dates, and grading criteria.

B. Objectives:

- Discuss JMO research paper requirements, guidelines, expectations, and outcomes.
- Understand how to submit papers for competitive prizes and awards offered by the Chairman, Joint Chiefs of Staff, the Naval War College, and other agencies.

C. Background:

The JMO research paper is an objective way for students to demonstrate competence at the Master's degree level. The research paper provides each student with the opportunity to focus on a theater or operational level issue, conduct research and analysis of the issue, and prepare a paper that advances the literature on that issue. Consequently, it enables students to concentrate on topics of significant value and interest to them as long as the topics are relevant to any of the individual sessions found in the JMO syllabus.

The research paper requires independent thought and competent writing because the final product should be suitable for publication in a professional journal. The range and depth of research should be adequate to support the student's approach and justify sufficiently the conclusions and recommendations or lessons learned. Another use of the paper is to stimulate innovative thinking in Service component and joint force staffs involved with the many complex issues of military force employment.

Combatant commanders, operating forces, and headquarters staffs solicit papers and monographs on topics of current interest to support initiatives, develop concepts, provide depth to existing analytical efforts, and provide fresh looks at the methods of accomplishing missions. The Naval War College's College of Naval Command and Staff and Naval Staff College is canvassed frequently for papers on particular subjects and is requested to stimulate interest in specific areas for research and writing.

A recent example is consideration of innovation in the application of naval force—how to accomplish the goal of fighting *smarter* rather than fighting with *more*. While some aspects of this project fall outside the parameters of the JMO research paper requirement,

many of the issues therein are applicable. These especially include doing the right things and doing them right—the result of integrating effectiveness and efficiency. In any case, open dialogue with your moderator team is essential in ensuring an appropriate topic is selected.

1. **Requirements.** The JMO research paper requires the following:

- a. A thesis: A definitive position that the paper will aim to defend, support, or justify.
- b. Sufficient research to analyze the thesis properly.
- c. Logical conclusions drawn from the material presented within the paper.
- d. Recommendations or lessons learned, as appropriate, demonstrating the paper's relevance to the modern operational commander.

2. **Topics.** Topics should be taken from one of the following areas:

- a. A current issue at the upper tactical or operational level of war.
- b. Operational art or the use of operational art to analyze a case.
- c. An option in support of a military strategy, operational concept, or a new doctrinal concept.
- d. An issue dealing with joint, interagency, multinational planning, execution, tasks, or functions at the operational level of war.
- e. Force employment innovation, such as the application of naval force at the operational level of war.
- f. A topic that applies to current, near-term, or future major operations or campaigns.
- g. A topic of value to an operational level commander.

Note: The JMO research paper should not be an examination of simple tactics, technology, force structure, or future force planning concepts. Also, it should not be a library search and recitation of published material, nor should it contain proposals or recommendations regarding numbers and types of weapons platforms, modifications to said platforms, weapons, sensors, or force structure. Moderators will answer any questions on specific issues relating to topic selection.

NWC 2062Y, *Operations Paper: Guidance for Students* contains the JMO Chairman's guidance for selecting a suitable topic and crafting a research question. It also contains detailed guidance on developing the paper from topic selection to final draft, candidate topical areas from requesting commands, a list of topics dealing with the operational level of war, extracts on the awards program, and instructions for submission of papers to professional journals. **NWC 2062Y** is an excellent resource for developing ideas and selecting a topic. Be aware, however, that some topics listed in **2062Y** are more applicable to other core courses and thus require transformation into JMO-worthy topics.

3. **Paper Proposal.** Students shall submit paper proposals to their moderators; the format of the proposal can be found in enclosure (1) to **NWC 2062Y**. Moderator acceptance of a proposal constitutes an understanding between the student and the moderator grading team. An accepted proposal means that the student and the moderators understand in common the

depth of research, extent of analysis, and quality of writing expected of the student, in addition to the requirements discussed above in paragraph 1.

4. **Research and Writing.** Research and writing shall meet graduate-level standards.

5. **Format.** Hacker and Sommers' *A Writer's Reference* and the *Naval War College Pocket Writing and Style Guide* is the standard for unclassified written work. Students should use the Chicago Manual of Style (CMS) format for notes and bibliography. Guidance for classified papers is available from the moderators. Additionally, the 2015 JMO Research Paper Template will be posted on Blackboard. Students may save this template as a file on their own computers *and either compose in the file directly, or paste their work into the file*. Use of the template is intended to aid in formatting of page numbers and section breaks.

6. **Report Document Page.** The final version of the paper submitted to the faculty requires a Standard Form (SF) 298 as the report document page. This page will be used as a coversheet for all other pages.

7. **Length.** The text of the JMO research paper will be 14 to 17 double-spaced pages in Times New Roman font size 12 with a one and a quarter left margin and one inch top, bottom, and right. (See the JMO Paper Template). Your moderators may accept longer papers depending on paper purpose and topic, but this acceptance must be obtained prior to paper submission.

8. **Faculty Advisor.** The paper advisor helps the student's move from topic selection to research question to thesis statement; define the scope of the research effort; keep research, analysis, and writing on track; and develop effective outlines and drafts. Each student will have a paper advisor; seminar moderators will serve as paper advisors for the students in their seminars. A minimum of two tutorials will be scheduled with your moderators. Subject matter expertise in a broad range of topics is resident in the War College faculty. Your moderator will assist you, if required or desired, in coordinating a meeting with a SME in your area of interest.

9. **Grading.** The JMO research paper represents a substantial portion of the overall Course grade. The paper will be evaluated for both substance and writing quality. Grades will be based on the criteria specified in the JMO syllabus.

10. **Prizes and Awards.** JMO research papers may compete for the prizes and awards bestowed annually during the June graduation ceremony. Students are encouraged to prepare their papers with the additional purpose of competing for one or more of these honors. Details are included in reading **NWC 2062Y**.

11. *Submission Schedule:*

9-12 March:	Conduct initial tutorial regarding potential paper topic.
19 March:	Submit paper proposal to moderators.
30 March-2 April:	Conduct follow-up tutorial; moderators and student agree on thesis and course of action.
24 April:	Suggested date to terminate research, commence analysis and writing.
4 May:	Suggested date to submit drafts to paper advisors for review.
13 May:	Operations research paper due to moderators NLT 0830.

The point of contact for this session is Commander Carol Prather, C-408.

D. Discussion Topics:

None.

E. Products:

A quality 14-17 page research paper that demonstrates the ability to coherently present a well-constructed argument and to demonstrate critical thought.

F. Required Reading:

Turabian, Kate L. *A Manual for Writers of Research Papers, Theses, and Dissertations*. 8th ed. Chicago: The University of Chicago Press, 2013. Scan. **(Issued)**.

U. S. Naval War College. *Naval War College Pocket Writing and Style Guide*. Newport, RI: Naval War College, August 2012. Scan. **(Issued)**.

_____. Joint Military Operations Department. *Operations Paper: Guidance for Students*. Newport, RI: Naval War College, January 2012. Scan. **(NWC 2062Y)**.

_____. JMO Paper Template, 2015. Scan.

G. Supplementary Readings:

Barzun, Jacques and Henry F. Graff. *The Modern Researcher*. Belmont, CA: Wadsworth Publishing, 2003.

Booth, Wayne C., Gregory G. Colomb, and Joseph M. Williams. *The Craft of Research*. 3d ed. Chicago: University of Chicago Press, 2008.

Hacker, Diana and Nancy Sommers. *A Writer's Reference*. 7th ed. Boston, MA: Bedford / St. Martin's, 2011.

Johns, Sylvia and Sarah Keller. *Cite it Right: the SourceAid LLC guide to citation, research, and avoiding plagiarism*. Osterville, MA: SourceAid, LLC, 2005.

University of Chicago Press. *The Chicago Manual of Style*. 16th ed. Chicago: University of Chicago Press, 2010.

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INTRODUCTION TO NAVAL TACTICS (Seminar)

Naval tactics are based upon conditions the chief causes of which, namely, the arms may change; which in turn causes necessarily a change in the construction of ships, in the manner of handling them, and so finally in the disposition and handling of fleets.

—Sebastien-Francois Bigot de Morogoues,
Tactique Navale, 1763

A. Focus:

The principal purpose of this session is to explain the importance of naval tactics, its relationship with strategy, and provide an overview of the key components of naval tactics. This session will set the stage for all the subsequent sessions on tactics of single naval combat arms.

B. Objectives:

- Comprehend the meaning and importance of naval tactics.
- Know and comprehend the mutual relationship between naval tactics, maritime strategy and tactics, and naval operational art.
- Describe the effect of technological advances on the evolution of naval tactics.
- Recognize the distinctions between minor and major naval tactical objectives and the linkage among tactical objectives, tasks, and targets.
- Summarize key aspects of tactics of weapons/sensors, individual platforms, naval combat arms, and combined naval combat arms.
- Explain the fundamentals of the theory of naval tactics (e.g. tactical factors of space-time-force, tactical functions, tactical decision-making and planning, tactical leadership, tactical thinking v tactical vision, tactical training).

C. Background:

In generic terms, naval tactics can be defined as the *theory and practice of planning and employing naval tactical actions aimed to accomplish a tactical objective*. Naval tactics is one of three components of naval art. All three components of naval art are closely related. Their mutual relationships are highly dynamic. There is no clear-cut line separating these three components of naval art. Actions and events at the tactical level often affect strategy and policy in the most profound way. Operational art considerably influences both strategy and policy on the one hand and tactics on the other. The strategy and policy framework dominates operational art, and the latter, in turn, dominates tactics.

The foundations of the theory of naval tactics are naval history and the current/future naval technological advances. In developing the theory of naval tactics, one should study a large number of historical examples in great detail. The greater the number of examples studied, the more likely a theorist is to derive commonalties that could be of value today and for some time in the future. Naval tactical combat is usually an integral part of a major naval/joint operation or maritime campaigns. Hence, the study of the historical examples must always take into account that broader operational framework. A sound theory of tactics must fully explain and analyze the current and pending naval technological advances and their effect on tactical employment of naval forces. Because of the frequent and sometimes unpredictable changes in naval technologies, the durability of these influences is, of course, relatively short. The sound theory of naval tactics should avoid being either exclusively based on history or on new technologies. The importance of new technologies should not be either overrated or underrated. The reality of war at the tactical level should always dominate theory. Expressed differently, the theory of naval tactics will not be sound if it conflicts with the practice of war.

The theory of naval tactics can be arbitrarily grouped into two categories: general theory and tactics of naval forces. *General naval tactics* explain and analyze mutual relationships and patterns of both tangible and intangible elements of tactics common to tactics of platforms and forces as a whole. In contrast, *tactics of naval forces* deal with the tactical employment of naval weapons/sensors/gear/equipment, individual naval platforms and their groups, naval combat arms, and combined naval combat arms.

In generic terms, *general naval tactics* consist of the following mutually related elements: tactical objectives, tactical factors of space-time-force, methods and elements of combat forces' tactical employment, tactical functions, tactical decision-making and planning, tactical leadership, tactical education, and tactical training.

Tactics of naval forces consist of tactics of naval weapons/sensors and gear/equipment; naval platforms and their groups, single naval combat arms, and combined naval combat arms tactics, respectively. Each of these types of tactics consists of theory and practice. Various aspects of general naval tactics are also part of the tactics of naval forces as a whole and their individual parts.

Tactics of naval weapons/sensors deal with the employment of each type of missiles (e.g. ASMs, ASCMs, LACMs, SAMs), shipboard/coastal guns, torpedoes, Antisubmarine Rockets (ASROC), depth charges (DCs), and mines. Specific types of tactics are developed for the use of mine counter measures (MCM) gear and sensors. In recent years, *tactics for unmanned vehicles* (unmanned aerial vehicles (UAVs); unmanned surface vehicles (USVs); and unmanned underwater vehicles (UUVs)) are also being developed.

Tactics of naval platforms and their groups consist of tactics for the employment of various types of surface combatants (e.g. cruisers, destroyers, frigates, corvettes, missile craft, gunboats, patrol craft, combat craft, minelayers, MCM ships/craft), submarines (ballistic-missiles armed submarines, attack submarines, midget submarines); fixed-wing aircraft (e.g. attack aircraft, reconnaissance aircraft, maritime patrol aircraft) and rotary wing aircraft (e.g. multi-purpose helicopters, ASW helicopters, transport helicopters).

Tactics of naval combat arms deal with the methods and procedures in the tactical employment of single combat arms (surface forces, submarine forces, naval aviation, naval special forces, and coastal defense) in obtaining/maintaining or denying sea control, and

exercising control. It also deals with the tactics in their employment in operations short of war (e.g. combating piracy, combating terrorism, support of counter insurgency).

Tactics of combined naval combat arms deal with the employment of two or more naval combat arms, and they also often include the combat arms/branches of other services. This requires synchronized employment of diverse forces in terms of the objective, place, and time. The most complex of all, and extremely difficult to execute in practice, is the three way employment of surface combatants-submarines-aircraft. Cooperation among these combat arms is extremely difficult to plan and execute. This problem is even more difficult when large combatants, submarines and aircraft have to cooperate with small surface combatants and coastal defense forces plus land-based air defenses deployed in the littorals. Combined naval combat arms tactics is the key requirement for success in anti-surface warfare (ASUW), anti-submarine warfare (ASW), amphibious warfare, maritime trade warfare, and mine warfare (MIW). In each of these warfare areas, the combat arms/branches of other services and air forces in particular, are also employed in cooperation with naval forces.

The point of contact for this session is Professor Milan Vego, C-427.

D. Discussion Topics:

Describe the meaning and importance of naval tactics.

Discuss the mutual relationship between naval tactics and maritime strategy and tactics and naval operational art.

How do new naval technologies affect naval tactics?

Discuss and analyze the distinctions between minor and major naval tactical objectives. What is the linkage among tactical objectives, tasks, and targets?

Explain the key aspects and differences in tactics of weapons/sensors, individual platforms, naval combat arms, and combined naval combat arms.

Discuss and analyze the fundamentals of the theory of naval tactics (e.g. tactical factors of space-time-force, tactical functions, tactical decision-making and planning, tactical leadership, tactical thinking vs. tactical vision, tactical training).

E. Products:

None.

F. Required Readings:

Hone, Trent, "U. S. Navy Surface Battle Doctrine and Victory in the Pacific," *Naval War College Review*, Vol. 62, No. 1 (2008) pp. 67-105. (NWC 1200).

Vego, Milan, "*On Naval Tactics*" Newport, RI: Joint Military Operations Department, U. S. Naval War College, September 2015. (NWC 2148).

G. Supplementary Readings:

Bernotti, Romeo, *The Fundamentals of Naval Tactics* (Annapolis, MD: The United States Naval Institute, 1912).

Brodie, Bernard, "New Tactics in Naval Warfare," *Foreign Affairs*, Vo. 24, No. 2 (January 1946), pp. 210-223.

Fioravanzo, Giuseppe, *A History of Naval Tactical Thought* (Annapolis, MD: Naval Institute Press, 1979).

Fiske, Bradley, A., "Naval Principles," *The North American Review*, Vol. 102, No. 720 (November 1915), pp. 693-701.

Hone, Trent, "The Evolution of Fleet Tactical Doctrine in the U. S. Navy, 1922-1941," *The Journal of Military History*, vol. 67, no. 4 (October 2003), pp. 1107-1148.

Hughes, Wayne, P. Jr., *Fleet Tactics: Theory and Practice* (Annapolis, MD: Naval Institute Press, 1986).

Hughes, Wayne, P. Jr., editor, *The U. S. Naval Institute on Naval Tactics* (Annapolis, MD: Naval Institute Press, 2015).

Lautenschlaeger, Karl, "Technology and the Evolution of Naval Warfare," *International Security*, Vol. 8, No. 2 (Fall 1983), pp. 3-51.

Robison, Samuel S., and Robison, Mary, *A History of Naval Tactics From 1530 to 1930. The Evolution of Tactical Maxims* (Annapolis, MD: The United States Naval Institute, 1942).

Sumida, Jon Tetsuro, "A Matter of Timing: The Royal Navy and the Tactics of Decisive Battle, 1912-1916," *The Journal of Military History*, Vol. 67, No. 1 (January 2003), pp. 85-136.

Tunstall, Brian, edited by Dr. Tracy, Nicholas, *Naval Warfare in the Age of Sail. The Evolution of Fighting Tactics 1650-1815* (Edison, NJ: Wellfleet Press, 2001).

THE TACTICAL EMPLOYMENT OF NAVAL FORCES: OBJECTIVES AND METHODS (Seminar)

Take, sink, burn, or destroy the enemy fleet.

—Lord St. Vincent:
Orders to Nelson off Toulon, 21 May 1798

A. Focus:

This session will explain and analyze the principal methods of employing maritime forces to accomplish minor or major tactical objectives.

B. Objectives:

- Identify the main methods of tactical employment of naval forces without the use of weapons.
- Explain the terms naval attack, naval strike, and naval raid and their variants.
- Understand the meaning of the term naval engagement and its importance in a naval battle.
- Comprehend the role and importance of naval battle and the various types of naval battles.

C. Background:

The accomplishment of any military objective requires a specific method in the employment of naval/maritime forces. In generic terms, the method of combat employment can be described as the *combat disposition, deployment, and maneuver, sectors of effort, sequence and timing of the combat employment of the main and supporting forces, and their disengagement and withdrawal*. Technological advances had in the past, and will continue to have in the future, the single largest effect on the development of new methods for combat employment of naval forces. Methods of combat employment also depend on the type of platforms/forces and characteristics of the physical environment in which they operate. There is also a great difference between methods used for accomplishing an offensive vice defensive objective.

In general, the larger the scale of an objective, the more complex the method for its accomplishment, the larger and more diverse the forces required, and the greater the needed area for their deployment/redeployment and combat employment. In the employment of maritime forces, a distinction is made among naval tactical actions and major naval/joint operations and maritime campaigns. As the title suggest, naval tactical actions are aimed at accomplishing tactical objectives. Hence, the theory and practice of naval tactical actions

belongs to the field of naval tactics. In contrast, the theory and practice of major naval/joint operations and maritime campaigns is the domain of operational art.

Naval tactical actions are conducted with and without the use of weapons. They can be planned or unplanned. They can be conducted at any time and regardless of the ratio of forces in a given theater. Naval tactical actions are much simpler to plan and execute than major naval/joint operations or maritime campaigns. They are conducted in a sea/ocean area varying in size from a combat zone/sector to a maritime area of operations.

The principal methods of tactical employment of naval forces without the use of weapons are reconnaissance/surveillance, search, tracking, and patrolling. In generic terms the main methods of tactical actions with the use of weapons are attacks, strikes, raids, engagements, and battles. These terms are not necessarily identical to those used in the employment of ground forces. For example, in land warfare the term "attack" is used to describe actions ranging from those aimed at accomplishing minor tactical objectives to those intended to accomplish operational or even strategic objectives. The terms "attack" and "defense" are also used to describe the overall posture of the ground troops along the entire or major part of the front. This problem is compounded by the fact that very often these terms are not precisely defined, even in various doctrinal documents.

The oldest and simplest tactical action of naval forces is a *naval attack*— a combination of maneuver and decisive use of weapons/sensors aimed at accomplishing a minor tactical objective. It is normally a part of a strike or an engagement/naval battle. It can also be conducted independently.

A *naval strike* is the most important method in the tactical employment of naval forces. It gradually emerged after the introduction of anti-ship missiles (ASMs), advanced torpedoes, and "smart" bombs. Today, strike is a dominant method of combat employment for combat aircraft and missile armed submarines and surface combatants. A naval strike can be defined as *a series of successive or simultaneous attacks coordinated in time and place, to accomplish a major tactical (or in some case partial operational) objective*. It is characterized by the rapidity of action (often measured in minutes), swift maneuvering of platforms, and quick firing of weapons.

A *naval raid* can be described as *a clandestine and swift penetration of the enemy-held coast, destruction or neutralization of the assigned objective, followed by a planned and swift withdrawal*. It is a broader variant of naval strike. It can be conducted independently or as integral part of a major operation. A naval raid is usually conducted when the enemy has general sea control but not local control.

The term *naval engagement* is widely used, but usually its meaning is not well defined or understood. In U. S. military parlance, it is used interchangeably with the terms encounter and attack. However, a *naval engagement* is a clash of opposing forces that is larger than an attack/strike and smaller than a battle. It consists of a series of related strikes/counterstrikes and attacks/counterattacks by a single or several naval combat arms, intended to accomplish the main objective in a naval battle. Offensive and defensive, air, anti-air, naval, and combined arms engagements are differentiated. A naval engagement consists of *the entirety of attacks, counter attacks, strikes, counter strikes and diverse defensive measures all intended to achieve a single operational objective*.

A naval battle is the highest and most complex method of tactical combat employment of naval forces. Until the advent of submarines and aircraft, it was fought only on the sea surface. Since then, a naval battle encompassed all three physical mediums or dimensions. A naval battle can be defined as *a series of mutually related attacks/counterattacks, strikes/counterstrikes, and defensive measures, coordinated in time and place to accomplish a major tactical objective*. It can be fought exclusively on the surface, or it can encompass subsurface and airspace. It can be conducted on the open sea/ocean or in the littoral waters. A naval battle can be fought when one's forces possess local sea control, the enemy has sea control, or in a situation where the state of un-commanded sea prevails.

The point of contact for this session is Professor Milan Vego, C-427.

D. Discussion Topics:

Describe the main methods of tactical employment of naval forces without the use of weapons.

Define "naval attack." Discuss types of naval attack with regard to platforms, weapons used, and attack sectors.

Discuss the role and importance of naval strikes in the past and today. What are the main types of naval strikes today?

What is the meaning and what are the main purposes of naval raids? Are they viable today?

Describe the key difference between a naval engagement and a naval attack or strike?

Describe the role and importance of naval battles and their main types? Is this method of tactical employment still viable today?

E. Products:

None.

F. Required Readings:

Vego, Milan, *Naval Tactical Actions*. Newport, RI: Joint Military Operations Department, U. S. Naval War College. August 2015. (NWC 2155).

_____. *Objectives of Naval Warfare*. Newport, RI: Naval War College, August 2015. (NWC 1102).

G. Supplementary Readings:

Arquilla, John and Ronfeldt, David. *Swarming & The Future of Conflict*. Santa Monica, CA: RAND/National Defense Research Institute, 2000.

Baudry, A. *The Naval Battle. Studies of the Tactical Factors* (London: Hugh Rees, Ltd, 1914).

Haghshenass, Fariborz, *Iran's Asymmetric Naval Warfare*. (Washington, D.C.: Washington Institute for Near East Policy, Policy Focus no. 87, September 2008).

Kirkpatrick, C.W., *The Naval Night Battles in the Solomons* (Pompano Beach, FL: Exposition Press of Florida, 1987).

Lambert, Nicholas A., "Our Bloody Ships" or "Our Bloody System"? Jutland and the Loss of The Battle Cruisers, 1916," *The Journal of Military History*, Vol. 62, No. 1 (January 1998): 29-55.

Sumida, Jon Tetsuro, "The Royal Navy and the Tactics of Decisive Battle, 1912-1916," *The Journal of Military History*, Vol. 67, No. 1 (January 2003): 85-136.

Sweetman, Jack, *Great American Naval Battles*. (Annapolis, MD: Naval Institute Press, 1998).

NAVAL PLATFORMS, WEAPONS, AND SENSORS (Seminar)

A sword never kills anybody; it is a tool in the killer's hand.

—Seneca

A. Focus:

This session will provide an overview of the standard platforms, weapons, and sensors commonly found in navies today. Its intent is to begin to develop an understanding of naval force capabilities.

B. Objectives:

- Comprehend the capabilities and limitations of naval forces to conduct the full range of military operations in pursuit of national interests.
- Analyze the importance of adaptation and innovation on military planning and operations.

C. Background:

The rapid advance in both sensor and weapon technology during the Second World War had an inestimable effect on naval tactics, the kind of platforms navies procured and warship design itself. In the years following the close of World War II, technologies with a direct impact on naval warfare continued to evolve and improve. Both surface and air search radar, which were in their nascent stage at the beginning of the war, became commonplace among the major naval powers shortly thereafter. Such was also the case with sonar systems designed to locate, identify and track much more capable submarines. With the advent of the nuclear powered submarine, the surface to air guided missile, the anti-ship cruise missile, and the super-carrier; the tactical considerations of naval commanders underwent a considerable change.

As weapon and sensor capabilities changed, so did warship design. The advent of the guided missile, along with the increased range and capability of naval aviation and modern submarines, meant the heavy naval rifle (and the tactics to most effectively employ it) was supplanted in importance. Heavily armored warships were likewise replaced with much lighter designs with an emphasis on increased sensor capability. As new weapon systems are developed and capabilities evolve, so do the tactics. Increases in the range and lethality of offensive weapons coupled with increases in detection capabilities shortened the decision cycle of commanders in both the defensive and offensive aspects of naval combat.

With only the U. S. Navy and the Russian Navy maintaining a number of cruisers, the multi-role destroyer has now become the most prolific and capable surface combatant. Even smaller platforms such as frigates, corvettes and fast missile craft may have significant offensive capabilities that must be mitigated by maritime planners.

Leaps in non-nuclear propulsion technology, such as air-independent propulsion (AIP), have made the diesel submarine into an extremely capable platform which in some environments is more desirable than its larger nuclear powered cousin. Modern subsonic as well as supersonic long range anti-ship cruise missiles continue to proliferate with ever increasing levels of accuracy and lethality. These weapons, which may be launched from surface, subsurface and air platforms, put surface forces increasingly at risk. Likewise, improvements in the performance of undersea mines as well as modern torpedoes further threaten naval forces.

The proper synchronization of sensors, platforms, and weapon systems is a critical component in massing effective naval firepower on a desired target. By overwhelming a target's defensive capabilities with coordinated strikes a naval force may gain significant tactical and operational advantage. As naval forces cannot be regenerated as quickly as ground forces such an event may prove decisive.

The point of contact for this session is Commander Daniel Caldwell, C-414.

D. Discussion Topics:

How has the proliferation of long range Anti-Ship Cruise Missiles (ASCM) impacted naval warfare tactics?

Describe the relationship between sensor and weapon system capability to naval strategy.

What type of sensors/weapon systems are commonly found on most surface combatants?

What are some common vulnerabilities/limitations of modern sensor/weapon systems?

E. Products:

None.

F. Required Reading:

U. S. Naval War College, Joint Military Operations Department. *Forces/Capabilities Handbook*. Newport, RI: Naval War College, 2014. (NWC 3153P). Read pp. 11-12. (Issued).

_____. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. (NWC 2164).

G. Supplementary Readings:

Friedman, Norman. *The Naval Institute Guide to World Naval Weapon Systems, Fifth Edition*. Annapolis, MD: The United States Naval Institute Press, 2006.

Jane's Weapons Systems Naval 2012-2013. London, UK; Janes Information Group. 2012.

Janes Fighting Ships 2014-2015 116th Revised Edition. London, UK; Janes Information Group. 2014.

Wertheim, Eric. *The Naval Institute Guide to Combat Fleets of the World, 16th Edition: Their Ships, Aircraft, and Systems*. Annapolis, MD: The United States Naval Institute Press, 2013.

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FUNDAMENTALS OF SURFACE WARFARE (Seminar)

No captain can do very wrong if he places his ship alongside that of the enemy.

—Vice Admiral Horatio Nelson,
21 October 1805, Battle of Trafalgar

A. Focus:

This session will focus on the objectives and methods of employing Surface Warfare (SUW) forces in combat operations.

B. Objectives:

- Comprehend the objectives of surface warfare and the distinctions between its conduct in the open ocean and the littorals.
- Understand the influence of the physical environment on the employment of one's surface forces.
- Comprehend the main methods of combat employment of surface forces.

C. Background:

As defined by the Department of Defense Dictionary of Military and Associated Terms (Joint Publication 1-02), Surface Warfare is that portion of maritime warfare in which operations are conducted to destroy or neutralize enemy naval surface forces and merchant vessels. It also may be referred to as SUW.

The history of surface warfare is as old as naval warfare itself. From the Battle of Salamis in 480 BCE, through the age of sail and down to today, surface warfare remains a critical component of attaining and maintaining sea control. Until the 20th Century, the history of naval warfare was primarily the history of the surface combatant. From the triremes of the classical age to the ships of the line during the Napoleonic Wars and into the early 1900s, the power of a fleet was defined by the design and armament of surface ships along with the fighting characteristics of the men who served on them.

The primacy of the surface combatant in naval warfare was not challenged until well into the 20th century with the development of the airplane and the submarine as legitimate components of a battle fleet. Despite the introduction of those platforms, the surface combatant and surface warfare itself remains a cornerstone of naval power.

As technology has progressed throughout the centuries so have the types of platforms from which surface warfare is conducted. The oar powered triremes of the classical age with their rams and crews that fought ship to ship as soldiers eventually developed into the

wooden warship propelled by sail and mounting an ever increasing number of guns. These vessels, which began to proliferate in the 15th Century and reached their zenith in the early 19th Century, gave way in turn to the steam powered, iron armored warships of the mid to late 1800s.

With the launching of the HMS DREADNAUGHT in 1906, the British Royal Navy introduced the age of the battleship which was to remain the primary naval combatant until being displaced by the aircraft carrier during the Second World War. Designed primarily for ship to ship combat through the use of ever larger guns with increasing range, the anti-surface role of the battleship was eventually overtaken by a number of ship types armed with anti-ship cruise missiles (ASCMs). Originally developed as a radio controlled, air launched weapon by Germany in WWII, the proliferation of ship launched ASCMs enabled relatively small surface combatants to engage surface targets at much longer ranges with devastating effect. First used successfully by the Egyptians against the Israeli destroyer EILAT in the Six-Day War of 1967, the ASCM can now be found on numerous surface combatants around the world.

Today, surface warfare and anti-surface warfare is carried out both in the open ocean and in the littorals from a number of platforms ranging in size from large cruisers to much smaller corvettes and missile patrol craft. The primary surface combatant of today's blue water navies is the destroyer which is a multi-role platform capable of engaging surface, air, and sub-surface targets with a mixture of guns, missiles and torpedoes.

Although technology has caused a number of revolutionary changes in the design of warships and their tactical means of employment, the operational objectives of surface warfare and anti-surface warfare have remained relatively constant. Surface forces play a critical role in obtaining and maintaining sea control and remain essential for the protection of sea lines of communications (SLOCs), denial of enemy SLOCs, support to amphibious operations, maritime surveillance, coastal security, convoy protection and the destruction and/or neutralization of an enemy fleet.

The point of contact for this session is Commander Daniel Caldwell, C-414.

D. Discussion Topics:

Explain the objectives of Surface Warfare.

What are the differences between conducting surface warfare in the open ocean and in the littorals?

What are the effects of the physical environment (weather/climate) on surface forces as they attempt to obtain/maintain control of the surface/subsurface/air and exercise that control?

E. Products:

None.

F. Required Reading:

Gurtcheff, John H. *The Battle of Jutland*. Air Command and Staff College, Montgomery, Alabama, 1984. (NWC 4007).

U. S. Naval War College, Joint Military Operations Department. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. (NWC 2164).

Vego, Milan *Fundamentals of Surface Warfare*. Newport, RI: Joint Military Operations Department, U. S. Naval War College. 2013. (NWC 1164).

Ya'ari, Yedida. *The Littoral Arena, A Word of Caution*. Naval War College Review, 48, No. 2 (Spring 1995): 7-21. (NWC 4110).

G. Supplementary Readings:

Adkins, Roy. *Nelson's Trafalgar: The Battle That Changed the World*. New York, NY: Penguin. 2006.

Bennett, Geoffrey. *Naval Battles of the First World War*. NY: Penguin. 2002.

Bulkley, Robert. *At Close Quarters, PT Boats in the United States Navy*. Annapolis, MD: Naval Institute Press. 2004.

Cross, Robert F. *Shepherds of the Sea: Destroyer Escorts in World War II*. Annapolis MD: Naval Institute Press. 2013.

Gordon, Andrew. *The Rules of the Game: Jutland and British Naval Command*. Annapolis, MD: Naval Institute Press. 2013.

Grace, James. *The Naval Battle of Guadalcanal: Night Action 13 November 1942*. Annapolis MD, Naval Institute Press. 1999.

Hornfischer, James D. *The Last Stand of the Tin Can Sailors: The Extraordinary World War II Story of the U. S. Navy's Finest Hour*. London: Bantam Press, 2004.

_____. *Neptune's Inferno: The U. S. Navy at Guadalcanal*. London: Bantam Press, 2012.

Muir, Malcolm. *Black Shoes and Blue Water: Surface Warfare in the United States Navy, 1945-1975*. Washington, D.C.: Department of the Navy, 1996.

O'Hara, Vincent P. *The U. S. Navy Against the Axis, Surface Combat 1941-1945*. Annapolis MD, Naval Institute Press. 2007.

- Pope, Dudley. *The Battle of the River Plate: The Hunt for the German Pocket Battleship Graf Spee*. Ithaca, NY: McBooks Press 2005.
- _____. *Flag 4: The Battle of Coastal Forces in the Mediterranean*. Annapolis, MD: Naval Institute Press, 2006.
- Roscoe, Theodore. *United States Destroyer Operations in World War II*. Annapolis, MD: Naval Institute Press, 1953.
- Sauer, Howard. *The Last Big-Gun Naval Battle: The Battle of Surigao Strait*. Palo Alto, CA: Glencannon Press, 1999.
- Schull, Joseph. *Far Distant Ships: An Official Account of Canadian Naval Operations in World War II*. Ontario, CA: Stoddart Publishing, 1953.
- Strauss, Barry. *The Battle of Salamis: The Naval Encounter that Saved Greece- and Western Civilization*. New York, Simon and Schuster 2005.
- Sumida, Tesuro, Jon. "The Royal Navy and the Tactics of Decisive Battle, 1912-1916," *The Journal of Military History*, 67, No. 1 (January 2003): 85-136.
- Toll, Ian. *Six Frigates: The Epic History of the Founding of the U. S. Navy*. New York, NY: W.W. Norton & Company, 2007.
- Willmott, H.P. *The Battle of Leyte Gulf. The Last Fleet Action*. Bloomington, IN: Indiana University Press, 2005
- Yates, Keith. *Graf Spee's Raiders: Challenge to the Royal Navy 1914-1915*. Annapolis, MD: Naval Institute Press, 1994.

FUNDAMENTALS OF SUBMARINE WARFARE (Seminar)

Tenacity, Dick. Stay with the bastard till he's on the bottom.

—CDR Mush Morton, USN,
Commanding Officer, USS *Wahoo* (SS-238)

A. Focus:

This session will focus on the objectives and methods of employing submarine forces in the struggle for sea control and in sea denial.

B. Objectives:

- Describe the range of missions performed by submarines.
- Comprehend the main objectives and methods of combat employment of submarine forces.
- Explain the unique challenges of submarine operations in the littorals and the Arctic.
- Understand the importance of the human factor in the art of submarine warfare.
- Comprehend the unclassified capabilities of submarines.

C. Background:

Technological innovations have continued to expand submarine roles and missions. At the start of the First World War, senior officers of all of the Great Powers were unsure as to the role of the submarine. Submarines were originally employed for coastal defense and as an arm of the battle fleet operating in close proximity with battleships. In 1917 during World War I, German U-boats adopted unrestricted warfare sinking thousands of tons of merchant shipping. The British effectively countered this tactic with convoys. During World War II, Germans U-boats employed Wolf pack tactics that concentrated firepower permitting simultaneous attacks that often overwhelmed convoy escorts. Even after over one hundred years of submarine operations, there still remains some ambiguity in the employment of submarines.

Submarines provide the operational commander with a diverse mission set that includes Undersea Warfare (Anti-Submarine Warfare (ASW) and Mine Warfare (MIW)), Intelligence-Surveillance-Reconnaissance (ISR), Anti-Surface Warfare (ASUW), Strike, Strategic Deterrence, Naval Special Warfare (NSW), Strike Group Support, and other operations such as maritime interdiction and counter narcotics. The inherent stealth and independence associated with the employment of submarines continues to perplex an enemy and provide a unique ability to control the subsurface and surface domains.

The point of contact for this session is Captain Eric Irwin, USN, C-423.

D. Discussion Topics:

Discuss the historic role of submarines and their roles today. Have these roles changed significantly over the last 100 years?

Describe the challenges of conducting submarine operations in various operating environments.

Discuss the human factor as it applies to the art of submarine warfare.

Describe the unclassified capabilities of the various classes of submarines and the weapons they employ.

E. Products:

None.

F. Required Readings:

Lautenschlager, Karl. "The Submarine in Naval Warfare, 1901-2001." *International Security* 11, No. 3 (Winter 1986-1987). Read pp. 94-111. (NWC 4077).

Richardson, John VADM, USN, Commander Submarine Forces. *Undersea Warfighting*. (July 2011). Read pp. 1-23. (NWC 3168).

U. S. Naval War College, Joint Military Operations Department. *Forces/Capabilities Handbook*. Newport, RI: Naval War College, 2014. (NWC 3153N). Scan pp. 14-27. (Issued).

_____. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. (NWC 2164).

G. Supplementary Readings:

Blair, Clay. *Hitler's U-Boat War: The Hunters, 1939-1942*. New York, Random House, 1996.

Doenitz, Karl. *Memoirs: Ten Years and Twenty Days*. Annapolis, MD: Naval Institute Press, 1958.

FUNDAMENTALS OF NAVAL AIR WARFARE (Seminar)

I-uh-have the utmost respect for Yamamoto-san. If it had not been for him, there would be no naval aviation. However, the most brilliant man can occasionally make a mistake.

— Admiral Chuichi Nagumo
Imperial Japanese Navy

A. Focus:

The focus of this session is to describe and to analyze the main characteristics and the importance of naval air forces in the struggle for sea control and in sea denial and to differentiate them from land based aviation assets.

B. Objectives:

- Comprehend the fundamental differences between land based air power and sea based air power.
- Understand advantages/disadvantages in the employment of naval aviation in obtaining/ maintaining and exercising or denying sea control.
- Comprehend the influence of the physical environment on the employment of one's naval aircraft on the open ocean and in the littorals.

C. Background:

Navies have shown interest in aviation and the possibilities of its use since the introduction of Samuel P. Langley's flying machine in the late 19th Century. It was not until the early 20th Century that navies organized and funded aviation programs specifically intended to develop airplanes for use in the maritime domain. These early aircraft were initially used as naval gunfire spotters, intended to improve the accuracy of, and extend the effective range of their main warship, the battleship. By 1914, testing of air delivered ordnance was accomplished and within a few short years, forward firing ordnance for the purpose of countering aircraft attack was introduced. From there, Naval Aviation has developed to support operations across the air, surface and subsurface domains.

For gaining and maintaining sea control, Naval Air greatly extends the range and increases the speed at which a Commander may either attack enemy forces in the air, land, sea or undersea domains or defend his own forces in a maritime environment. Naval Air also has the capacity to significantly enhance situational awareness in the maritime environment by enabling the Commander to dispatch sensors (including wetware) well beyond surface sensor ranges. In these ways, Naval Air offers significant enhancement to the Commander's

ability to gain and maintain sea control, as well as the ability to deny the enemy control of the sea.

Naval Air, while a significant aid to warfare in the maritime environment, due to its speed, range and lethality, has certain challenges associated with its efficacy. Naval Air should arrive on-station with sufficient assets and strength to project power and defend the fleet it is attached to (naval counter-air will be the subject of a separate seminar). Projecting naval air-power generally requires air superiority in the operational environment in which the Fleet is operating such that an opposing air force can be detected and neutralized before it becomes a threat to the Fleet. Naval Air should also direct its capabilities in detecting and neutralizing the opposing surface and undersurface force threat to the Fleet. Sustainment and persistence can become challenging if circumstances require 24/7 coverage for more than 96 hours if only one aircraft carrier is assigned to a particular Naval Force. Meteorological conditions can also threaten effective Naval Air operations (for example, heavy sea states that do not permit launch and recovery of aircraft). Aircrew and flight deck personnel fatigue, as well as aircraft reliability can also reduce sustainment and persistence with only one aircraft carrier assigned to the Naval Forces in a specific AOR. Naval Air assets are relatively cheap, fast and effective with respect to achieving positive identification of threats with multiple sensors for weapons employment, but if a commander desires to maintain a continuous air presence in the maritime environment, the costs associated with putting Naval Air Strike assets on station for continuous coverage could be prodigious and could require multiple carriers and the associated additional logistical support in the form of fuel and parts, etc. (although with the advent and future incorporation of Unmanned Combat Ariel Vehicles (UCAVs), to the Fleet Force, persistent surveillance and possibly limited force protection may be possible). For these reasons, it is important for Naval Air to be viewed as an integral and integrated part of the overall Naval Force and not viewed in isolation.

With respect to other services' ability to support Naval Air operations, as with surface ships and submarines, Naval Air Forces ultimately require sustainment from land. Ground and other land air forces may be used to secure and maintain friendly force lodgments and access to vital sustainment bases. Additionally, in a littoral environment, ground and air forces could be used to attrite the enemy's ability to threaten friendly Naval Forces with land based air and missile systems. Further, destruction or seizure of enemy bases by friendly air and ground forces could deny the enemy basing and sustainment of assets that could be used to threaten friendly naval assets. Forward ground and non-naval air assets can also provide situational awareness in areas where Naval Air might be used for power projection ashore.

Additionally, as technology advances, there appears to be potential for increased reliance upon Unmanned Aerial Vehicles (UAVs) in maritime operations. A survey of reports of ongoing discussions in defense establishments across the world indicates that many countries recognize the potential strengths of maritime UAVs. It may be useful to consider how the development and employment UAVs in a maritime role will affect sea control and sea denial operations in the future.

The point of contact for this session is Captain Richard LaBranche, USN, C-420.

D. Discussion Topics:

Discuss the principal advantages and disadvantages in the combat employment of one's naval air forces; i.e., sea control, sea denial, and power projection.

Discuss how the effects of the physical environment affect the employment of one's naval aircraft on the open ocean.

Explain how the physical environment affects employment of fixed-wing and rotary-wing aircraft in the littorals, and enclosed/semi enclosed seas in particular.

Discuss how/when other services (air forces and ground forces) might be employed in support of naval air to obtain/maintain and exercise control or denial of the sea?

Discuss how the increasing prevalence of UAV's may affect Naval Air operations.

E. Products:

None.

F. Required Readings:

Bussert, James C. "Chinese Navy Employs UAV Assets." *Signal Magazine*, April 2012. (accessed 15 January 2015) <http://www.afcea.org/content/?q=node/2918>. (NWC 4046).

Dugan, Michael J. "Air Power Concentration, Responsiveness and the Operational Art." *Military Review* LXIX, no. 7 (July 1989): Read pp. 12-21. (NWC 4133).

Knott, Richard S. *Attack From the Sky, Naval Air Operations in the Korean War*. Washington, D.C.: Naval Historical Center, Department of the Navy, 2004. Read pp. 11-17. (NWC 4061).

Leighton, Bruce G. "The Relation of Aircraft to Sea-Power." *U. S. Naval Institute Proceedings* (September 1928): Read pp. 728-745. (NWC 4109).

Manazir, Michael C. RADM. "Responsive and Relevant." *U. S. Naval Institute Proceedings*. 140, no. 2, (February 2014). (NWC 4155).

Reynolds, C. "The U. S. Fleet-in-Being Strategy of 1942." *Journal of Military History* 58, no. 1 (1994). (NWC 4068).

U. S. Chairman of the Joint Chiefs of Staff. *Joint Operational Access Concept (JOAC)*. Washington, D.C.: CJCS, January 2012. Scan.

U. S. Naval War College, Joint Military Operations Department. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. (NWC 2164).

G. Supplementary Readings:

Caravaggio, A. "The Attack at Taranto." *Naval War College Review* 59, no. 3 (2006): 103-127.

Douglas, A. H., Captain, USN. "Employment of Aviation in Naval Warfare." Newport, RI: U. S. Naval War College, 14 December 1939. Read Chapter II, pp. 15-32.

Hallion, Richard P. "Air Power and the Changing Nature of Warfare." *Joint Force Quarterly*, Autumn/Winter 1997-98

Lambeth, Benjamin S. *American Carrier Air Power at the Dawn of a New Century*. Santa Monica: RAND, 2005.

Moffett, William A., RADM, USN. "Some Aviation Fundamentals." *U. S. Naval Institute Proceedings*, October 1925.

Ramsey, Logan C. "The Influence of Aircraft on the Exercise of Sea Command." *U. S. Naval Institute Proceedings*, October 1938.

Trimble, William F. *Admiral William A. Moffett Architect of Naval Aviation*. Washington, D.C.: Smithsonian Institution Press. 1994.

Willmott, H. P. "The Battle of the Philippine Sea." in *Great American Naval Battles*, ed. Jack Sweetman. Annapolis, MD: Naval Institute Press, 1998. Read pp. 324-341. (NWC 4073).

TABLETOP EXERCISE #1: ORGANIZING NAVAL ASSETS IN THE OPEN OCEAN (Exercise)

Show me a good loser, and I'll show you a loser.

—Vince Lombardi

A. Focus:

Students will be presented a tactical problem in the form of a brief scenario and using the information learned in the previous seminars on surface, submarine, and naval air power, will aggregate (task organize) their forces based on objective, friendly and threat capabilities, and the environment. Moderators will serve as the opposing force. The purpose of this simple exercise is to allow students to demonstrate an understanding of the capabilities of various naval platforms, weapons, and sensors.

B. Objectives:

- Apply critical and creative thinking skills and knowledge of naval power in task organizing a naval force based on objective, threat, environment, and capabilities.
- Demonstrate a general understanding of the broad capabilities of the United States Navy's principal weapons, platforms, and sensors.

C. Background:

Tabletop exercises, sand table exercises, and all manner of educational tools have been in use since the Indians devised the game of *chaturanga*—modern day chess—to teach military strategy and maneuver to their officers. From a cursory scan of the readings, we discover that map exercises, staff exercises or Command Post Exercises (CPX), training trips, tactical talks, and sand-table exercises are the more common form of these 'war games'. The purpose of this specific exercise presented here is to allow students to come together to solve a real-world problem using a fictional scenario.

You are expected to concisely present your decision(s) and to argue (support) them based on what we know of capabilities of the various platforms. Leveraging the very basic information discovered thus far, students will apply critical thought and rudimentary problem solving skills to first disaggregate the assigned forces and then, based on objectives, threat, capabilities, and the environment, aggregate their forces to maximize likelihood of tactical success.

This is not a war fighting exercise, merely the first in a series of exercises that will expand in scope, complexity, and ambiguity—all intended to sharpen your critical thinking and decision making skills. It is, in the language of critical thinking, a logic exercise in

which students are presented an opportunity to demonstrate understanding of materials discussed thus far. Your moderator will provide input/feedback on the various decisions considered. Students are forewarned, however, that future exercises are designed to increase in complexity, depth, and ambiguity.

The point of contact for this session is Professor Bill Hartig, C-428.

D. Discussion Topics:

Describe the utility of war gaming as a training and educational tool.

Develop, propose, and support your potential solution(s) to the given problem regarding the aggregation of naval power.

E. Products:

An in-seminar discussion regarding potential task organizations for U. S. naval forces in a fictional scenario.

F. Required Readings:

Hoffman, Rudolf M. General, with Generals Franz Halder, Friedrich Fangor, and Field Marshal Wilhelm List. "A Synopsis of War Games." U. S. Army Historical Division, 1952. (NWC 4143).

United States Naval War College, Joint Military Operations Department. Tabletop Exercise #1 Scenario and Forces Assigned. U. S. Naval War College, Newport, RI. 2015. (NWC 4144).

_____. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. (NWC 2164).

G. Supplementary Readings:

Cheatham Ernest C. Major USMC. The Educational War Game. A Command and Staff College Research paper. Marine Corps Command and Staff College: Quantico, VA, 1967.

Creveld, Martin van. *Wargames: From Gladiators to Gigabytes*. Cambridge University Press: NY, 2013.

Nofi, Albert A. *To Train the Fleet for War: The U. S. Navy Fleet Problems: 1923-1940*. Naval War College Press: Newport, RI. 2010.

INTRODUCTION TO OPERATIONAL ART (Seminar)

Successful strategy achieves national and alliance political aims at the lowest possible cost in lives and treasure. Operational Art translates those aims into effective military operations and campaigns.

—Colonel Harry G. Summers, U. S. Army (Ret),
On Strategy II: A Critical Analysis of the Gulf War, 1992

A. Focus:

Furthering your understanding of classic military thinkers and theory, this session focuses on the historical roots of operational art. This session also introduces the linkages between operational art, strategy, and tactics. The study of the theory known as operational art is presented here using mid- to high-intensity combat scenarios as that is the most direct manner in which to discern the nature of the art. That is not to say, however, that operational art does not apply to lower intensity combat scenarios as we shall see later in the trimester.

B. Objectives:

- Comprehend the meaning of the term Operational Art.
- Understand the historical emergence of Operational Art.
- Comprehend how Operational Art links strategy to tactics.
- Understand why it is important to understand and apply Operational Art.

C. Background:

In *Strategy and War* you discussed, and in some cases will discuss Clausewitz, Mahan, and Douhet, military theorists who looked to the past to better predict how wars could be fought in the future. These theorists lived a turbulent time, highlighted by technical advancement. As both the size, speed, and diversity of military forces grew—as well as the space they occupied and fought in, these men understood that a good strategy alone could not guarantee a victory; conversely, one could win every tactical engagement and still lose the war. To achieve victory, they understood that one must effectively link strategy and tactics to ensure that tactical actions support strategic objectives. In modern warfare, the strategic perspective is often too broad to ensure the decisive employment of one's sources of power; likewise, the tactical framework is often too narrow.

Another field of study and practice exists to synchronize multiple sources of power properly in order to accomplish the ultimate strategic or operational objective. This third component of military art, *Operational Art*, occupies an intermediate position between the realm of policy and strategy and that of tactics—and is inextricably linked to both. Without

operational art, war would be a set of disconnected engagements, with relative attrition the only measure of success or failure.

Operational art, as defined by Dr. Milan Vego in *Joint Operational Warfare: Theory and Practice*, is the component of military art concerned with the theory and practice of planning, preparing, conducting, and sustaining campaigns and major operations aimed at accomplishing strategic or operational objectives in a given theater. Operational art emerged in the nexus of societal change and advancements embodied by industrialization and technology. As the size of military forces and the resultant complexity of their movement and sustainment grew, military leaders and theoreticians, both on land and at sea, sought effective methods for conducting war on a greater scale. The interaction among study, theory, and practice continues today.

The application of operational art is a cognitive *process*; the *conduct* of warfare at the operational level preceded the emergence of formal operational art. Operational Art is *not* strategy; strategy is developed and implemented at the national and theater level. Operational Art helps commanders make sound decisions—and to use resources efficiently and effectively to achieve strategic objectives. It requires broad vision, the ability to anticipate, and effective joint and multinational cooperation. Finally, operational art is practiced not only by Joint Force Commanders, but also by their senior staff officers and subordinate commanders.

The point of contact for this session is Professor Doug Hime, C-423.

D. Discussion Topics:

How does theory contribute to our understanding of operational art?

How does operational art link strategy and tactics?

Discuss how technology has influenced operational art and how practitioners and theoreticians view the conduct of war.

How does operational art assist commanders in making sound military decisions?

Discuss how an understanding of operational art assists commanders in non-traditional warfare.

How does operational art relate to the operational level of war?

Explain why operational art begins with the objective.

E. Products:

None.

F. Required Readings:

Mattelaer, Alexander. "The Crisis in Operational Art." A paper presented at the European Security and Defence Forum, London, UK, November 2009. (NWC 1118).

Menning, Bruce W. "Operational Art's Origins." *Military Review* 77 (1997). Reprint. Read, pp. 1-15. (NWC 1110).

Vego, Milan. *Joint Operational Warfare: Theory and Practice*. Newport, RI: Naval War College, reprint 2009. (Issued). Read pp. I-3–I-29.

G. Supplementary Readings:

Adams, Dwight L. and Clayton R. Newell. "Operational Art in the Joint and Combined Arenas." *Parameters* 18 (June 1988): 33-39.

Greer, James K. "Operational Art for the Objective Force." *Military Review* 82 no.5 (Sep-Oct 2002): 22-29.

Hope, Ian. "Misunderstanding Mars and Minerva: The Canadian Army's Failure to Define an Operational Doctrine." *The Army Bulletin* 4 no. 4 (Winter, 2001). Also available at http://www.army.forces.gc.ca/caj/documents/vol_04/iss_4/CAJ_vol4.4_07_e.pdf.

Krause, Michael D., and Cody R. Phillips, eds. *Historical Perspectives of the Operational Art*. Washington, D.C.: Center for Military History, Department of the Army, 2006.

Matheny, Michael R. "The Roots of Modern American Operational Art." United States Army War College Paper, Carlisle, PA, n.d. Also available at http://www.au.af.mil/au/awc/awcgate/army-usawc/modern_operations.pdf.

Naveh, Shimon. *In Pursuit of Excellence: Evolution of Operational Theory*. London: Frank Cass, 1997.

Record, Jeffrey. "Operational Brilliance, Strategic Incompetence: The Military Reformers and the German Model." *Parameters* 16 (Autumn 1986): 2-8.

Schneider, James J. "Theoretical Implications of Operational Art." *Military Review* (September 1990): 19-27.

Schuurman, Bart. "Clausewitz and the 'New Wars' Scholars." *Parameters* 40 no. 1 (Spring 2010): 89-99.

Vego, Milan. "Glossary of Operational Terms." *Joint Operational Warfare: Theory and Practice*. Newport, RI: Naval War College, reprint 2009.

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THE WAR IN THE PACIFIC (Lecture)

The fate of the Empire rests on this enterprise and every man must devote himself totally to the task in hand.

—Admiral Isoroku Yamamoto
Commander in Chief of the Imperial Japanese Navy,
7 December 1941

A. Focus:

This lecture briefly introduces the historical case study for operational art. It provides students with the general origins of the War in the Pacific, the principal actors on each side, and some of the major operations and campaigns that led to the series of battles known as the Battle of Leyte Gulf. This presentation is intended to provide historical context for the Philippines Campaign in general and not be a rehash of the previously-studied (for some) Strategy and War sessions on World War II. It provides the strategic and operational background for the October 1944 Allied invasion of the Republic of the Philippines and the subsequent campaign to wrest the control of the Philippines from the Imperial Japanese. The campaigns that preceded as well as selected succeeding U. S. campaigns later in the Pacific War will set the conditions for a deeper understanding of the supporting naval operations that occurred in and around Leyte Gulf in 1944 during the campaign to retake the Philippines.

B. Objectives:

- Understand the historical setting for the U. S. entry into WWII.
- Comprehend the major operations and campaigns in the Pacific in WWII.
- Understand the concept and sequence of events associated with the combat actions in the invasion of the Philippines from both the Allied and Japanese perspectives.

C. Background:

Students often ask, why study a war that happened so long ago? Or, why study a pre-precision guided munitions era war? What utility is there in it for a modern maritime war fighter? The answer to this lies in the timelessness of the theory of war. While we know that the character of war changes with technological evolution and so forth, it is the nature of war that is immutable; thus, the lessons we glean from an understanding of the battles for Leyte Gulf vis-à-vis operational art remain valid today.

The 1944 Philippines Campaign does in fact have all the aspects of a modern, twenty-first century campaign: a maritime component that fought to establish local sea control to facilitate Sixth Army's decisive effort ashore; three numbered Air Forces isolating the

archipelago and providing operational fires to support the campaign objectives; a special operations component coordinating an effective insurgency against the Japanese occupiers; and finally, decisive combat operations ashore. General Douglas MacArthur skillfully orchestrated these components—in time, space, and purpose—to achieve a theater strategic objective.

As students at the U. S. College of Naval Command and Staff and Naval Staff College, you will consider the maritime aspects of this campaign, specifically Operation KING II—the largest and most complex sea-air conflict (four separate battles over two days) in history. As the final showdown between the U. S. and Japanese fleets, this one major joint/combined operation involved enormous naval and air forces in huge areas and over vast distances (the operation spanned over one hundred thousand square miles). As such, the operation provides superior illustrations of virtually all aspects of operational art and remains directly relevant to joint operations in the littorals today.

The point of contact for this lecture is Professor Bill Hartig, C-428.

D. Discussion Topics:

None.

E. Products:

None.

F. Required Readings:

Hime, Douglas N. U. S. Naval War College. Joint Military Operations Department. “The Leyte Gulf Case Study.” Newport, RI: Naval War College, December 2013. Read pp. 1-22. (NWC 1196).

Hone, Thomas. “The U. S. Navy’s 1942-1945 Pacific War as One Coherent Campaign.” Newport, RI: U. S. Naval War College, Joint Military Operations Department, 2010. (NWC 1186).

G. Supplementary Readings:

Barbey, Daniel E. *MacArthur’s Amphibious Navy: Seventh Amphibious Force Operations, 1943–1945*. Annapolis, MD: U. S. Naval Institute Press, 1977.

Commander-in-Chief, United States Fleet. COMINCH P-008, *Amphibious Operations: Invasion of the Philippines, October 1944 to January 1945*. Washington, D.C.: Navy Department, 1945.

Cutler, Thomas J. *The Battle of Leyte Gulf, 23–26 October 1944*. New York: Harper Collins, 1994.

Potter, E. B. "The Battle of Leyte Gulf." *Sea Power*. Englewood Cliffs, NJ: Prentice-Hall, 1960.

Smith, Robert Ross. "Luzon versus Formosa" in *Command Decisions* by the Office of the Chief of Military History. Washington, D.C.: United States Army, 1960.

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MILITARY OBJECTIVES AND THE LEVELS OF WAR (Seminar)

Pursue one great decisive aim with force and determination—a maxim which should take first place among all causes of victory.

—Carl von Clausewitz, *Principles of War*, 1812

A. Focus:

The foci of this session are on understanding the distinctions between aims/goals and objectives, the importance of the objective in operational warfare, the process of determining and articulating objectives, the scale of military objectives, the linkage between the objective and its constituent tasks, and the relationships between the military objectives and corresponding levels of war.

B. Objectives:

- Understand the relationship among and between the strategic, operational, and tactical levels of war and their corresponding objectives.
- Understand the interrelationships among/between the four elements of national power (diplomatic, informational, military, and economic) and how the *strategic objective* relates to the *desired end state*.
- Identify the concepts of regressive planning and operational-level planning that are the focus of the course.
- Analyze how the “Four Questions” of operational warfare can help operational-level commanders employ assets in the pursuit of strategic objectives.

C. Background:

A clearly stated and attainable objective is essential to the theory and practice of war; without one, any military effort expended is literally aimless. This is particularly true at the operational and strategic levels of war because the stakes are higher than at the tactical level. Almost all aspects of operational warfare are related, either directly or indirectly, to the objective to be accomplished.

Tactical, operational, and strategic objectives are differentiated according to their scale. Among other things, the objective determines the method of one’s combat force employment, the size of the physical space for accomplishing it, the level of war, and also the level of command, type of planning, and major phases and elements of one’s combat force employment. The scale of the objective determines the method of one’s combat force

employment and the size of the physical space in which one's forces are to be employed, not vice versa.

The selection of an objective is the first and most critical step in undertaking any military enterprise. Once the objective is determined, the entire problem becomes greatly simplified (but not necessarily easy to resolve). Determining a military objective, however, is often the most difficult aspect of operational planning, requiring a careful analysis of the enemy's factors of space, time, and force. In general, the larger the scale of the objective, the more important the factors of space, time, and force to be considered become.

It is not sufficient to specify the objective alone; one must also clearly articulate what type of action must be carried out to accomplish the specific objective or the staff will be unable to plan the pending operation effectively. The operational commander and planners must also try to anticipate the possible effects (consequences or results) of the accomplishment of the military objective. This is more an art than a science. Much depends on the commander's knowledge and understanding of the enemy and all aspects of the military and nonmilitary situation. There are, however, many pitfalls in the process, which, in turn, can make predictions tenuous at best.

The scale and complexity of the military objective to be accomplished determine the level of war to be conducted. It is generally recognized that the larger the military objective, the higher the level of war. Thus, as discussed in *Introduction to Operational Art*, three basic levels of war exist: strategic, operational, and tactical. The strategic level of war can be divided into two sublevels: national-strategic and theater-strategic. In JMO, we will focus on the operational level of war.

The point of contact for this session is Commander Darren Houston, Royal Navy, C-407.

D. Discussion Topics:

Discuss the differences in the meaning of the terms aim, goal, and objective.

What is the relationship between the military objective and its constituent tasks?

How do U. S. military commanders derive military objectives from higher strategic direction?

Discuss the differences between and components of military art (strategy, operational art, and tactics) and the levels of war.

E. Products:

None.

F. Required Readings:

Hime, Douglas N. U. S. Naval War College. Joint Military Operations Department. "The Leyte Gulf Case Study." Newport, RI: Naval War College, December 2013. Review pp. 1-22. **(NWC 1196)**.

Liddell-Hart, Sir Basil Henry. "The Objective in War: National Object and Military Aim." *Naval War College Review* 5, no. 4 (December 1952). **(NWC 2046)**.

Vego, Milan. *Joint Operational Warfare: Theory and Practice*. Newport, RI: Naval War College, reprint 2009. "Policy-Strategy-Operational Art Nexus." Read pp. I-35 to I-50 and pp. II-3 to II-20. "Military Objectives and the Levels of War." **(Issued)**.

G. Supplementary Readings:

MacGregor, Douglas A. "Future Battle: The Merging Levels of War." *Parameters* 22, no.4 (Winter 1992-93): 33-47.

Vego, Milan. *Joint Operational Warfare: Theory and Practice*. Newport, RI: Naval War College, reprint 2009. "Objectives of Land Warfare."

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THE THEATER: STRUCTURE AND GEOMETRY (Seminar)

War is the business of positions.

—Napoleon I

A. Focus:

This session aims to explore the meaning of the term “theater,” its structure, and its elements or geometry. The inextricable linkages among and between the objective(s), theater, and levels of war and command will be discussed, and the Leyte case study will be introduced to illustrate and enable a critical analysis of the theater structure and selected parts of the theater geometry in seminar.

B. Objectives:

- Comprehend the relationship between the military objective(s) and the physical structure of a theater.
- Understand the considerations that may inform and influence theater structure.
- Understand the meaning and importance of the key terms pertaining to theater geometry (positions, bases of operation, lines of operation, decisive points, lines of communication, and objectives).

C. Background:

Modern theory holds that a theater of war should be militarily organized to ensure the most favorable conditions for the employment of one’s forces across the entire spectrum of conflict, from peacetime competition to high-intensity conventional war. The larger the assigned military objective(s), the greater the force required and, therefore, the larger the physical environment required to deploy, concentrate, and maneuver the force, and the larger the infrastructure needed to support the employment of one’s forces. Hence, the theater has to be divided into a number of geographically-based areas to ensure the most effective employment of one’s military and nonmilitary sources of power. The structure of a three-dimensional theater, overlaid with the information environment, can include one or more theaters of operations, areas of operations, and combat zones (or sectors). The size of each subdivision should be primarily based on the scale of the military objective to be accomplished and the selected method of combat force employment. The latter, in turn, dictates the size and mix of one’s forces required to accomplish a given objective. The theater and its subdivisions are the very basis for establishing and maintaining tactical, operational, and strategic levels of command or command echelons.

Any theater contains a variety of natural and artificial features called “theater elements” or “theater geometry” that significantly affect the planning and execution of military action at any level of war. These theater elements include: positions, distances, bases of operation, physical objectives, decisive points, lines of operation (LOO), and lines of communication (LOC)—any of which may have tactical, operational, or even strategic significance. The key to evaluating the military importance of these features involves not only their number and characteristics, but also their relative position and distance from each other—the geometry of the situation. Operational commanders and their staffs must, therefore, know and understand the advantages and disadvantages of these elements to ensure the most effective employment of their forces against the enemy, but also to protect friendly forces from reciprocal actions by the enemy.

The point of contact for this session is Commander Darren Houston, Royal Navy, C-407.

D. Questions:

In building an appreciation of the operational environment, what physical and abstract factors bear on theater structure and how are they balanced?

Explain the advantages and disadvantages of central and exterior positions.

What is the original meaning and importance of the Jominian concept of a “decisive point”? Has the information age changed that concept? If so, how?

To what extent are there differences in using lines of operations on land, in the air, or at sea? Explain.

Leyte Case Study:

Within the context of the Pacific Theater, what was the declared (or undeclared) theater structure for the Japanese and Allies during the Leyte operation?

Identify and discuss the advantages and disadvantages of the positions, and the respective lines of operations, in the employment of the Japanese and Allied naval forces. How did the Japanese and/or Allied commanders maximize the advantages and minimize the disadvantages of position and corresponding lines of operation?

What were the advantages and disadvantages of the positions and lines of operation in the employment of the Japanese and Allied ground forces and land-based aircraft?

Identify the principal decisive points from the Japanese and Allied perspectives. How well did the Japanese and Allied naval commanders recognize the importance of decisive points? What mistakes in selecting or omitting decisive points were made, if any?

E. Products:

None.

F. Required Readings:

Hime, Douglas N. U. S. Naval War College. Joint Military Operations Department. "The Leyte Gulf Case Study." Newport, RI: Naval War College, December 2013. Review pp. 9-22, read pp. 23-32. **(NWC 1196)**.

Vego, Milan. *Joint Operational Warfare: Theory and Practice*. Newport, RI: Naval War College, reprint 2009. **(Issued)**. Read Appendix A, pp. APP-5 to APP-10, Levels of Command, Chapter IV, IV-3 to IV-10, The Theater and its Structure, and IV-49 to IV-74, Theater Geometry.

G. Supplementary Readings:

Collins, John M. *Military Geography for Professionals and the Public*. Washington, D.C.: Brassey's, 1988.

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OPERATIONAL FACTORS (Seminar)

Armies do not burst from one theater of war into another; rather a projected strategic envelopment may easily take weeks and months to carry out. Besides, distances are so great that the chances of even the best measures finally achieving the desired result remain slight.

—Carl von Clausewitz, *On War*, 1832

A. Focus:

This session addresses another foundational aspect of operational art—the analysis of operational factors of space, time, and force and the interrelationship of these factors in achieving operational objectives. As we have already discovered, all aspects of operational art are linked to objectives. The concept of using information obtained from the analysis of operational factors in order to better understand the operating environment and to make sound operational decisions is examined in this session. This session builds on the theories introduced in earlier sessions, Military Objectives and the Levels of War, and the Theater: Its Structure and Geometry. Additionally, the assigned Leyte Gulf case study reading along with the historic information presented in the War in the Pacific lecture provides context for illustrating applications of operational factors in planning and conducting tactical actions and operations.

B. Objectives:

- Comprehend the operational factors of space, time, and force.
- Comprehend the interrelationship between the operational factors.
- Analyze the process by which an operational commander balances the operational factors against each other in order to achieve tactical and operational objectives.

C. Background:

The theoretical aspects of operational factors presented in this session enhance a commander's ability to make sound decisions. Knowledge gained in analyzing the factors of space, time, and force allow commanders greater mental freedom of action. In analyzing operational factors, the size, shape, and nature of a *space* will affect the quantity and type of *force* employed, as well as the *time* required to conduct a successful military operation. The necessity of commanders having a full understanding of the factors of *space*, *time*, and *force* and the ability to balance them toward achieving the objective are critical aspects of warfare.

Analysis of operational factors must begin with the objective. Without consideration of the objective, the analysis has no focus. Critical aspects of information from both the

enemy and friendly sides are included in this analysis. Although operational commanders may not be able to choose their *space*, they do have the ability to manage the characteristics of *time* and *force*. The size, shape, and nature of a *space* will affect the quantity and type of *forces* employed, as well as the *time* required to conduct a successful military operation. Managing aspects of all three of these factors allows the commander to shape the operational environment.

Operational factors must be considered early in the operational planning process. For an experienced practitioner of operational art, they become intuitive considerations. During the JMO trimester, operational factors will be considered explicitly to ensure that we, as planners, identify enemy strengths to avoid and weaknesses to attack while at the same time protecting friendly weaknesses and exploiting our strengths.

The point of contact for this session is Professor James P. Butler, C-429.

D. Discussion Topics:

Describe the key features of factor space. How do factor space and factor force relate?

Explain the main aspects of factor time. Describe the relationship between factor time and the factors of space and force.

Why is a precise assessment of factor force so difficult? Describe the theoretical difference between combat potential and combat power.

Explain the theoretical relationships between the operational factors space/time, space/force, and time/force. How might an operational commander balance these relationships to achieve objectives?

Leyte Case Study:

What were the Allied and Japanese objectives at Leyte?

Discuss the factors of time, space, and force from the Japanese and Allied perspectives.

How did factor force affect Japanese plans for the Philippines?

Assess the Allies and Japanese balancing of the operational factors of space, time, and force at Leyte Gulf. Provide potentials for improving their likelihood of success vis-à-vis the operational factors.

E. Products.

None.

F. Required Readings:

Hime, Douglas N. U. S. Naval War College. Joint Military Operations Department. "The Leyte Gulf Case Study." Newport, RI: Naval War College, December 2013. Review pp. 1-32. (NWC 1196).

Vego, Milan. *Joint Operational Warfare: Theory and Practice*. 2006. Reprint, Newport, RI: Naval War College Press, 2009. Read: pp. III-3 to III-63, Operational Factors.

G. Supplementary Readings:

Anderson, Charles Robert. "Leyte" in *U. S. Army Campaigns of World War II*, Washington, D.C.: U. S. Army Center of Military History, 1994.

Cannon, M. Hamlin. "The Strategic Plan," "The Nature of the Target," "Plans Are Made and Forces Are Readied," and Appendix A. In *Leyte: The Return to the Philippines, United States Army in World War II, The War in the Pacific*. Washington, D.C.: Center for Military History, United States Army, 1954.

Clausewitz, Carl von. *On War*. Michael Howard and Peter Paret, eds. and trans. Princeton, NJ: Princeton University Press, 1976.

Morison, Samuel Eliot. *Leyte, June 1944-January 1945: History of the United States Naval Operations in World War II, Volume 12*. Annapolis, MD: Naval Institute Press, 1958.

Vego, Milan. *The Battle for Leyte, 1944: Allied and Japanese Plans, Preparations, and Execution*. Annapolis, MD: Naval Institute Press, 2006.

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OPERATIONAL FUNCTIONS (Seminar)

I don't know what the hell this 'logistics' is that Marshall is always talking about, but I want some of it.

—Admiral Ernest King,
Commander-in-Chief of the Fleet and
Chief of Naval Operations (CNO), 1942-1945

A. Focus:

This session continues defining key aspects of operational art. After striving to understand the importance of analyzing the operational factors of space, time, and force, operational level commanders need to consider how other supporting structures and activities may affect objectives or outcomes. To maximize effectiveness in the employment of forces at the operational level of war, a number of supporting structures and activities, arbitrarily called “operational functions,” need to be fully organized and developed. This session will first discuss the operational functions as defined by Milan Vego—and then the joint functions described in Joint Doctrine. The six operational functions identified in Dr. Vego’s analysis of operational warfare are slightly different from the six functions identified in joint publications. For example, Vego identifies logistics (planning and executing the movement and support of forces) as an operational function while Joint Publication 3-0, *Joint Operations* refers to sustainment (a provision composed of both logistics and the personnel services necessary to conduct operations) as one of the six joint functions. The synchronization of these operational and joint functions ensures and enhances the ability of operational commanders and their subordinate elements to carry out their missions in both peace and war.

B. Objectives:

- Comprehend the role and importance of operational and joint functions in operational planning and execution.
- Understand how operational and joint functions support major operations and campaigns.

C. Background:

In *Operational Warfare at Sea: Theory and Practice*, Milan Vego identifies six operational functions which he argues are supporting structures and activities that should be fully organized and developed by the operational commander for maximum effectiveness in employing one’s combat forces. These operational functions include: command organization (or command structure), intelligence, command and control warfare (C2W), fires, logistics,

and protection, and their integration ensures efficiency and effectiveness. The sequencing and synchronization of operational functions ensures and enhances the ability of operational commanders and their subordinate elements to carry out their assigned responsibilities throughout a campaign or major operation. Similarly, joint doctrine states that “joint functions” are related capabilities and activities grouped together to help the Joint Force Commander (JFC) integrate, synchronize, and direct joint operations. In accordance with Joint Publication 3-0, *Joint Operations*, joint functions are common to joint operations at all levels of war, and fall into six basic groups—command and control, intelligence, fires, movement and maneuver, protection, and sustainment. Some operational functions, such as command and control and intelligence, apply to all operations. Others, such as fires, may not apply, depending on the mission. For example, operational fires may not be necessary when conducting a humanitarian operation.

In a mature theater, operational and joint functions will normally be established nearly in their entirety. However, in an immature theater, they may exist in a rudimentary form, or not at all. Understanding the impact and interaction of these functions at the operational level of war is critically important for proper planning, preparation, employment, and sustainment of one’s own forces in the achievement of assigned objectives.

Operational and joint functions shape actions prior to and throughout a major operation. Operational level practitioners will come to appreciate that at this level of war it is the enemy functions which are most vigorously attacked/degraded in order to set the conditions for component success at the tactical level. A superior force can be degraded by an indirect attack upon its functions. As war is a reciprocal act, joint force commanders will expend great effort and resources protecting friendly functions from enemy actions.

The point of contact for this session is Professor James Butler, C-429.

D. Discussion Topics:

Combatant commanders establish, maintain, and protect operational functions for routine peacetime activities as well as for war. What risks does the commander assume in an immature theater in which the functions have not yet been (fully) established?

As our armed forces become ever more information-based, what is the impact of information on each operational function and the relationship between the functions?

What is the relationship between operational factors and operational functions?

What is the role and importance of command and control warfare in providing support to a campaign or major operation?

Leyte Case Study:

Command Organization—how did command structures affect operations at Leyte?

Command and Control Warfare—to what extent did both sides employ operational security, military deception, or psychological operations during the Leyte Gulf operation?

Operational Intelligence—what advantages did operational intelligence provide to the Allied Commanders at Leyte? How were the Japanese commanders disadvantaged by operational intelligence at Leyte?

Operational Fires—how were Allied operational fires used to support the Leyte Gulf operation? To what extent were they effective? Why?

Operational Protection—to what extent did either of the opposing forces at Leyte consider and plan for the use of operational protection?

Operational Logistics—how did the Allied commanders address operational logistics in the Leyte operation? What impact did operational logistics have on Japanese forces?

Sustainment—how did the Japanese commanders sustain forces on the island of Leyte? How did the Allied forces sustain forces as part of the major operation at Leyte?

Movement and Maneuver—describe how Allied commanders employed maneuver to achieve positional advantage over the enemy at Leyte.

E. Products.

None.

F. Required Readings:

Hime, Douglas N. U. S. Naval War College. Joint Military Operations Department. “The Leyte Gulf Case Study.” Newport, RI: Naval War College, December 2013. Review pp. 1-32. (NWC 1196).

U. S. Office of the Chairman, Joint Chiefs of Staff. *Joint Operations*, Joint Publication (JP) 3-0. Washington, D.C.: CJCS August 11, 2011. Read: pp. III-1 to III-39

Vego, Milan. *Operational Warfare at Sea: Theory and Practice*. New York: Routledge, 2009. Read: pp. 69-98. (Issued).

G. Supplementary Readings:

Bolick, Joseph A. “The Influence and Reasons for Acceptance or Rejection of Operational Intelligence during the 1914 and 1943 Kursk Campaigns.” Fort Leavenworth, KS: School of Advanced Military Studies, U. S. Army Command and General Staff College, 26 April 1988.

- Cutler, Thomas J. *The Battle of Leyte Gulf, 23–26 October 1944*. New York: Harper Collins, 1994.
- Goodrich, David M. “Forgotten Mission: Land Based Air Operational Fires in Support of the Leyte Gulf Invasion.” Joint Military Operations Department. Newport, RI: Naval War College, 2000.
- Handel, Michael I. “Intelligence and Military Operations.” In *Intelligence and Military Operations*. London: Frank Cass, 1990.
- Hutcherson, Norman B. “Command and Control Warfare: Putting another Tool in the War-Fighter’s Data Base.” Maxwell AFB, AL: Air University Press, 1994.
- Porter, Laning M. “Preconceptions, Predilections, and Experiences: Problems for Operational Level Intelligence and Decision Making.” Fort Leavenworth, KS: School of Advanced Military Studies, U. S. Army Command and General Staff College, 12 May 1986.
- Rockwell, Christopher A. “Operational Sustainment: Lines of Communication and the Conduct of Operations.” Fort Leavenworth, KS: School of Advanced Military Studies, U. S. Army Command and General Staff College, 3 May 1987.
- Vego, Milan. *The Battle for Leyte, 1944: Allied and Japanese Plans, Preparations, and Execution*. Annapolis, MD: Naval Institute Press, 2006.
- _____. *Joint Operational Warfare: Theory and Practice*. 2006. Reprint, Newport, RI: Naval War College Press, 2009.

MAJOR OPERATIONS / CAMPAIGNS AND THEIR ELEMENTS (Seminar)

What the theorist has to say here is this: one must keep the dominant characteristics of both belligerents in mind. Out of these characteristics a certain center of gravity develops, the hub of all power and movement, on which everything depends. That is the point at which all our energies should be directed.

—Carl von Clausewitz *On War*, 1832

A. Focus:

The focus of this session is to explain and analyze the principal methods of combat force employment to accomplish operational or strategic objectives in a theater. The second part of this session explains the main elements of major operations and campaigns with a focus on the concept of the center of gravity, the point of culmination, and on operational/strategic deception.

B. Objectives:

- Know and understand the principal methods of combat force employment in general.
- Describe the differences between/among tactical actions, major operations, and campaigns, and how they relate to the levels of war.
- Identify and examine the principal elements of warfare as applied to the operational level of war.
- Know and understand the meaning and concept of the terms ‘critical factors,’ ‘culminating point’ and ‘center of gravity.’
- Understand a process for deducing enemy centers of gravity and the subsequent deconstruction of the center of gravity.
- Explain the utility of the concept of center of gravity in analyzing military problems.
- Describe the concept of culmination and identify potential indications of friendly and enemy culmination.

C. Background:

Methods of combat force employment are an important component of operational art. While battles and campaigns have received inordinately greater attention in U. S. doctrinal publications, the same cannot be said about major operations. This lack of interest has been compounded by differences in terminology. Each Service, although using the same or similar terms, defines methods of combat force employment differently (even differently than joint

doctrine). The full extent of Service differences is such that some of the terms used are not recognized by other Services, while other terms have no generally accepted definition or are not defined at all. More often than not, terms are used loosely and without regard to their real meaning or commonly accepted definitions.

Modern methods of combat force employment are the result of a long evolution of warfare. In the nineteenth century, “decisive” battles were the area of study and practice of tactics, while strategy was concerned with the conduct of campaigns. In that era, primarily a single Service conducted campaigns, although there are examples where navies took part as well (the American War of Independence, the Peninsular War, the Crimean War, the American Civil War, and so forth).

The principal methods of combat force employment today are tactical actions, major operations, and campaigns. The terms are differentiated by the military objectives they are intended to accomplish and the corresponding command echelon responsible for their planning, preparation, and execution. Tactical actions are normally conducted to accomplish tactical objectives, while the principal methods for accomplishing strategic or operational objectives are major operations and campaigns.

Tactical actions (battles, engagements, strikes, attacks, etc.) are aimed at accomplishing major or minor tactical objectives in a given combat zone or sectors and, in some cases, can encompass an area of operations. They are usually an integral part of major operations. When conducted over time and in a certain sea or ocean area or airspace, tactical actions can cumulatively accomplish operational objective(s). Tactical actions can be either defensive or offensive in nature and are differentiated by the physical environment (land, sea, or airspace) in which they occur.

In generic terms, a major operation consists of series of related battles, engagements, and strikes and other tactical actions sequenced and synchronized in terms of time and space to accomplish an operational objective. Major operations are normally an integral part of a campaign. Sometimes, a major operation could be planned to accomplish a strategic objective in a situation short of war, and usually in an undeveloped theater. The examples of such major operations are U. S. invasion of Grenada in October 1983 (Operation URGENT FURY), U. S. invasion of Panama in December 1989 (Operation JUST CAUSE), and NATO’s actions in the Kosovo Conflict of 1999 (Operation ALLIED FORCE).

Again, in generic terms, a campaign consists of a series of related major operations (land, air/space, naval, special forces) sequenced and synchronized in terms of time and space and aimed to accomplish a military strategic or theater-strategic objective in a given (declared or undeclared) theater of operations. These operations are executed simultaneously or sequentially and are conducted according to a common plan controlled by a theater commander. The main purpose of a campaign may be either offensive or defensive. Land campaigns and maritime campaigns are differentiated according to the physical environment in which major operations predominantly take place. Because airspace is an inseparable part of a maritime or land theater, air forces are always employed jointly with other Services.

There is possibly no theoretical concept of operational art that generates as much debate as that of center of gravity (COG). Originally coined by Carl von Clausewitz in his magnum opus *On War*, it has become an integral part of how U. S. planners and commanders analyze an enemy's threat systems. There exists in service and joint doctrine many 'definitions' of the concept, but what is important to modern students of war is that they develop in their minds' eye their own understanding of the concept and not simply a pedantic rendition of doctrine.

The COG often serves as the focal point for operations that naturally employ all levers of national power and therefore permits a rational, analytical approach to operations planning. As we will come to discover, however, the concept of the center of gravity, while generally appropriate in the analysis of a rational force-on-force conflict, becomes much more arcane as we encounter irregular and hybrid war, especially at the operational level we will study this trimester.

Operational and Theater Strategic Commanders and their staffs are required to deduce appropriate centers of gravity for a given operation/campaign. Accordingly, there must be a method for accomplishing this task. Milan Vego presents to both the practitioner and student of war the concept of *critical factors*. This includes a listing of enemy critical strengths and weaknesses from which a potential COG is selected. COG selection is therefore accomplished—theoretically—through the analysis of enemy *critical factors*. Selection of a potential COG in the absence of a solid understanding of likely enemy objectives, however, is effort wasted. It is therefore incumbent upon planners that COG analysis follows the deduction of enemy objectives, both operational and (theater) strategic. Likewise, a sound understanding of the environment in which we will operate is essential. This initial understanding of the environment begins with a detailed analysis of the operational factors and operational functions, which are viewed through the lens of these deduced (enemy) and assigned (friendly) objectives. These are, along with an analysis of the theater and its structure, essential prerequisites to COG selection.

Closely linked to the concept of the COG is that of culmination. Another Clausewitzian concept, culmination is the ultimate goal for the military practitioner for it is at this point that we may, in theory, impose our will upon the enemy and *theoretically* achieve our designated objective. Once we destroy or significantly degrade an enemy COG, the enemy's ability to prevent us from achieving our objective is hypothetically taken away and we may impose our will on the enemy. In the harsh light of practice, however, the degradation of an enemy's COG is not always the coup d'grace that theory purports. Referring back to our foundational theorist Clausewitz, we discover that in war, the result is never final. It is therefore a mandate that planners and commanders alike continuously assess the operating environment to ensure that actions taken against a COG, either directly or indirectly, are having the expected outcomes.

Selection of the (a) COG is a complex process requiring a deep understanding of the enemy and the operating environment. The subsequent decomposition of the center of gravity leads to a general idea or scheme for defeating the enemy to include potential defeat mechanisms, objectives, timing, and so forth. It leverages many of the facets of operational art: principles of war, doctrine, factors, functions, and theater structure. Planners and commanders are required to balance the factors and determine relative advantages to use and weaknesses to exploit. The same critical analysis is required of both friendly and enemy

functions since operational level planners and commanders generally degrade/attack functions in order to set the conditions for the tactical success of their components. For example, one should consider the operational fires employed by Admiral Nimitz in Formosa and the *guerre de course* by employed by U. S. submarines against Japanese merchant shipping in order to degrade Japanese maneuver means prior to Krueger's troops arriving in the amphibious objective area. Each operational or theater strategic action was intended to set the stage for Sixth Army's tactical successes ashore, which led to the securing of Leyte.

Operational/strategic deception is one of the principal force multipliers in a given major operation or campaign. The operational/strategic level of command allows the commander to employ multi-service and often multi-national forces and assets in planning and executing operational/strategic deception. When properly conceived and executed, operational/strategic deception can significantly enhance the effectiveness of one's forces, prevent surprise, and reduce the effectiveness of the enemy forces. To realize possible benefits, operational commanders must not only understand the concept, but also must be willing to dedicate the time and forces required for operational deception to be successful.

During this session, students will develop a working definition of a COG, identify Japanese and Allied theater strategic and operational objectives and deduce enemy and friendly COGs. Once the COGs have been deduced, a moderator-led deconstruction of one of the COGs will be completed. This deconstruction, along with an understanding of friendly and likely enemy objectives, and an analysis of the theaters geometry, friendly and enemy operational factors, and operational functions, all set the stage for the following session, Operational Design.

The point of contact for this session is Professor Al Bergstrom, C-430.

D. Discussion Topics:

Why is it important to know and understand the true meanings of the key terms dealing with the methods of combat force employment?

Explain the principal methods for accomplishing major and minor tactical objectives. What is the true meaning of the term "major operation?"

Explain what constitutes a "campaign." Is there such a thing as an "air campaign?" Why or why not?

How does a planner or commander deduce an enemy center of gravity? Can you describe another method for deducing a center of gravity?

Explain the linkage between the objective and the center of gravity.

To what extent is the center of gravity concept valid across the spectrum of conflict? If not, what analytical tool may planners use to develop an operational idea?

How are the concepts of center of gravity and culmination related? Explain factors that may determine whether an indirect or direct approach to the center of gravity is appropriate.

What is the purpose of operational/strategic deception? Explain the relationship between tactical and operational/strategic deception.

Leyte Case Study

To what extent was the Allied amphibious landing at Leyte aimed to accomplish an operational or strategic objective?

Identify the type of major naval, ground, and air operation in terms of its main purpose (offensive v defensive; fleet v fleet, fleet v shore, air v ground; main or supporting, etc.) and timing (main, supporting, preliminary, initial, etc.) conducted by the Allied and Japanese forces in the Philippines and the adjacent sea/airspace between 17 and 26 October 1944.

What naval battles and engagements constitute what is popularly known as the “Battle of Leyte Gulf?” Were all battles or engagements planned or are they seen in retrospect as being planned?

Identify the key elements of the major naval and air operations conducted by the Japanese forces in defense of the Philippines in October 1944.

Identify the critical strengths and weaknesses of the Japanese and Allied sides in the operation.

Describe the operational centers of gravity for both the Japanese and the Allied side. Justify your analysis.

Which commander(s) do you believe demonstrated a deeper understanding of the concept of center of gravity? Justify your argument.

Describe the indications of culmination on the Japanese side during the Battle for Leyte Gulf.

Which commander(s) do you believe demonstrated a deeper understanding of the concept of center of gravity? Justify your argument.

Describe the indications of culmination on the Japanese side during the Battle for Leyte Gulf.

How does operational art relate to the defeat of an enemy and to attaining assigned objective(s)?

E. Products:

An in-seminar analysis of Japanese and U. S. objectives, critical factors, and centers of gravity for the Battle of Leyte Gulf and seizure of Leyte will be conducted during this session.

F. Required Readings:

Butler, James P. "Godzilla Methodology." *Joint Force Quarterly* 72. (1st Qtr, 2014): 26-30. (NWC 1097).

Hime, Douglas N. U. S. Naval War College, Joint Military Operations Department. "The Leyte Gulf Case Study." Newport, RI: Naval War College, December 2013. Read: Appendices A through F. (NWC 1196).

Strange, Joseph L., and Richard Iron. "Understanding Centers of Gravity and Critical Vulnerabilities: Part 2: The CG-CC-CR-CV Construct: A Useful Tool to Understand and Analyze the Relationship between Centers of Gravity and Their Critical Vulnerabilities." Air University Website, Last modified July 1 2014, <http://www.au.af.mil/au/awc/awcgate/usmc/cog2.pdf>. (NWC 1098).

U. S. Naval War College, Joint Military Operations Department, *The Joint Operations Planning Process Workbook*, Newport, RI: Naval War College, 1 July 2013. Read Appendix C. (NWC 4111J w/Chg 1). (Issued).

U. S. Office of the Chairman, Joint Chiefs of Staff. *Joint Operation Planning*, Joint Publication (JP) 5-0. Washington, D.C.: CJCS, 11 August 2011. Read pp. III-30.

Vego, Milan. *Joint Operational Warfare: Theory and Practice*. Newport, RI: Naval War College, reprint 2009. Read pp. VII-13–VII-33, "Concept of Critical Factors and Center of Gravity," pp. VII-73–VII-91, "Concept of Culminating Point," and pp. VII-97–VII-118, "Operational/Strategic Deception." (Issued).

G. Supplementary Readings:

Hartig, William. U. S. Naval War College, Joint Military Operations Department. "Complexity and the Center of Gravity." Newport, RI: Naval War College, 2010.

Mendel, William W. and Lamar Tooke. "Operational Logic: Selecting the Center of Gravity." *Military Review* (June 1993): 3-11.

_____. "Centers of Gravity & Critical Vulnerabilities: Building on the Clausewitzian Foundation So That We Can All Speak the Same Language." Perspectives on Warfighting, No. 4, Quantico, VA: Marine Corps University Foundation, 1996.

OPERATIONAL DESIGN (Seminar)

No plan of operations extends with certainty beyond the first encounter with the enemy's main strength. Only the layman sees in the course of a campaign a consistent execution of a preconceived and highly detailed original concept pursued consistently to the end.

—Field Marshal Helmuth von Moltke the Elder, 1871

A. Focus:

Following a selection of friendly and the deduction of our enemies objectives, a function and factor analysis, a review of the theater and its geometry, a discussion and deconstruction of the operational center(s) of gravity(COG(s)), coupled with an understanding of our own and the enemy's operating environment, students (and planners) are ready to begin to seek out a rudimentary understanding of an operational design. This seminar presents students with the general concept of an operational design or scheme for a major operation as part of a campaign.

B. Objectives:

- Distinguish the various elements that should comprise an operational idea/scheme.
- Summarize the relationship between operational and (theater) strategic objectives and operational and (theater) strategic centers of gravity.
- Understand the relationship between objectives, factors, functions, and COGs in an operational design.
- Using the Leyte Gulf case study, evaluate the performance of opposing commanders with respect to the concepts of critical factors and the center of gravity.

C. Background:

Military planning is a continuous process in preparation for assigned or future objectives/tasks. It involves a detailed and methodical evaluation of all aspects of contemplated military action. Planning makes future actions easier by allowing for quick, subsequent, and coordinated actions by the staff and other elements of the command. Proper planning allows for detailed and systematic examination of all factors involved in a forthcoming military action.

A major operation or campaign contains a number of elements that collectively ensure the accomplishment of the selected or assigned military objective(s). Thus, an overall operational design or operational idea should exist to ensure that one's forces are employed in a coherent manner and focused on the assigned operational or strategic objectives in the

theater. The principal elements of an operational idea for a major operation include: end state, phases, factor and function analysis, deduced enemy objectives, timing, ultimate operational (and sometimes strategic) objectives, theater structure, identification of the enemy's and friendly critical factors and center(s) of gravity, operational direction/axis, selected principles of war, operational maneuver and fires, methods of defeating the enemy's center of gravity (defeat mechanism), application of one's military/non-military sources of power, point of main attack (defense), operational deception, operational sequencing, concept of deception, operational synchronization, branches and sequels, operational pause, anticipating one's own operational/ strategic point of culmination, protection of one's own operational/ strategic center of gravity, operational momentum, operational reserves, regeneration of combat power, and operational sustainment.

An operational idea (sometimes referred to as an operational scheme) represents the very heart of the design for a major operation or campaign. In its essence, it is very similar to what is commonly known today as concept of operations (CONOPS) or at the tactical level of war, scheme of maneuver. An operational idea should describe in broad terms the intended sequence for the employment of service or functionally based forces (in a campaign) or combat arms (in a major operation) necessary to accomplish the assigned strategic or operational objectives. Optimally, an operational idea should be novel, avoid stereotyped employment of one's forces, present the enemy with a multi-dimensional threat, provide for surprise and deception, and ensure the speed of execution. It should clearly focus on the destruction or neutralization of the enemy's strategic (in a campaign) or operational (in a major operation) center of gravity.

The rudimentary framework for the operational idea springs from the factor/function, and center of gravity analysis and subsequent deconstruction. Many of the items cited above become evident in the deconstruction of the COG or in analysis of the factors and functions. In theory, a basic operation plan (OPLAN) normally contains only the most important elements of an operational idea; however, many aspects of the idea are then elaborated in detail in a subsequent Operations Order (OPORD) and its annexes, as well as in the supporting plans of subordinate commanders.

The rational, analytical deduction and subsequent deconstruction of a COG seems fairly straightforward in theory. In practice, however, it becomes far less linear and much more rugged. In fact, in metaphorical terms, the landscape can be said to 'dance.' Consider the case of the problem that manifests itself as a complex adaptive system (CAS) (an insurgency, for example); by its very nature, a CAS cannot have a 'single hub of all power and movement.' Does this render the concept of the COG moot? Far from it, as the analysis of a CAS will reveal linkages and nodes, and soon the planner will begin to develop a holistic understanding of the environment and forge a way ahead. And of course, the analysis of the friendly COG remains an essential task for planners, if for nothing more than to generate a deeper understanding of potential risks.

Facets of operational art will be considered in the analysis of the Leyte Gulf case study from both the Japanese and American commanders' perspectives. Additionally, a discussion of the impact of the U. S. seizure of Leyte and subsequent Japanese defeat and the concomitant destruction / degradation of the enemy's operational center of gravity on the

overall U. S. campaign objective (the seizure of the Philippine archipelago) will highlight the depth of understanding of operational art competent planners and commanders must possess in order to succeed.

The point of contact for this session is Professor Al Bergstrom, C-430.

D. Discussion Topics:

Describe the general components of an operational design. How do commanders and staffs generate an understanding of a given situation well enough to conceive an operational design?

Discuss the purpose and elements of the operational idea (scheme).

Discuss methods that can be used in destroying/neutralizing (the stronger side) or degrading/deceiving (the weaker side) enemy COG.

Explain the concept of operational sequencing and synchronization.

Explain the concept of branches and sequels.

How does a military professional arrive at a point where he or she can deduce an operational design in a grossly complex and ambiguous environment under the aegis of policy changes or ambiguous or unstated policy, coalition concerns, and close, real-time media scrutiny?

Leyte Case Study:

How would you assess the operational objectives determined by Admiral Toyoda? To what extent did the operational idea (scheme) employed by the Japanese provide an opportunity for success? How could they have made it more effective?

How are sequencing and synchronization different? Give examples of each from the Japanese plans. Did Admiral Toyoda have a better option to apply operational sequencing in his plans for naval defense of the Philippines?

What indications of culmination for both the U. S. and Japanese forces were present and how did the operational commanders and staffs assess them?

Through the lens of operational art, critique the operational design developed by the Japanese and U. S. Naval Commanders. What would you have done differently?

E. Products:

None.

F. Required Readings:

Hime, Douglas N. U. S. Naval War College. Joint Military Operations Department. "The Leyte Gulf Case Study." Newport, RI: Naval War College, December 2013. Review. (NWC 1196).

Vego, Milan. *Joint Operational Warfare: Theory and Practice*. Newport, RI: Naval War College, reprint 2009. Read: pp. IX-83 to IX-153. (Issued).

G. Supplementary Reading:

Boyd, John. "Destruction and Creation." *A Discourse on Winning and Losing*. Unpublished manuscript. August 1987.

Duggan, William. *Coup d'Oeil: Strategic Intuition in Army Planning*. Strategic Studies Institute monograph. Carlisle, PA: U. S. Army War College, November 2005.

Klein, Gary. *Sources of Power: How People Make Decisions*. Cambridge, MA: MIT Press, 1998.

Schmitt, John F. "Command and (Out of) Control: The Military Implications of Complexity Theory," in David S. Alberts and Thomas J. Czerwinski, eds., *Complexity, Global Politics, and National Security*. Washington, D.C.: National Defense University, 1997.

Schon, Donald A. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books, 1983.

Simon, Herbert A. *The Sciences of the Artificial*. 3rd Edition. Cambridge, MA: MIT Press, 1996.

OPERATIONAL THINKING AND LEADERSHIP (Seminar)

I am not afraid of an army of lions led by a sheep; I am afraid of an army of sheep led by a lion.

—Alexander the Great

A. Focus:

This session explores both the characteristics and elements of military thinking and leadership at the operational level of command and assesses the impact of decisions on the outcome of military operations. It also introduces students to the concepts of mission command and of the Chairman of the Joint Chiefs of Staff Desired Leader Attributes (DLAs) for Joint Force 2020.’

B. Objectives:

- Comprehend the concepts of operational thinking and operational vision.
- Understand why operational commanders need an operational perspective and how this perspective is achieved.
- Comprehend the tenets of mission command and the Desired Leader Attributes for Joint Force 2020.
- Examine common military leadership characteristics and attributes of successful commanders at the operational level of command.
- Assess the impact of leadership style and command decisions at the operational level of war.

C. Background:

Leadership is one of the most critical aspects of warfare and has had an immeasurable effect on military operations throughout history. Commanders throughout history have shaped the course of operations, campaigns, and conflicts, leaving behind legacies for others to emulate or reject. At the operational level of war, effective commanders require a broad perspective of all the elements of national power influencing their areas of operations in order to understand how their actions may impact the achievement of strategic objectives. This broader operational level perspective, which requires an understanding of operational art and the challenges of joint operations, renders decision-making processes more complex and challenging than at the tactical level.

In contrast to their subordinate counterparts, operational commanders must focus on military objectives beyond immediate tactical actions. Instead of concentrating on fighting

battles and engagements, the operational commander plans and conducts major operations and campaigns. In doing so, the operational commander must place trust in subordinate commanders and resist the temptation to become pre-occupied with the tactical level of war.

Successful operational commanders possess certain characteristics that, when coupled with professional knowledge and experience, set them apart from their peers. Integrity, intellectual capacity, creativity, and boldness allow them to make critical decisions that shape the outcomes of operations, campaigns, and conflicts. Operational thinking, or the ability to have a broad vision beyond the tactical perspective, can be developed through a synthesis of practical experience in war, exercises and maneuvers during peace, operational and strategic war gaming, professional education, and the systematic self-study of history, geography, international relations, economics, nationalism, society, culture, and so forth. The study of past wars, and their major operations, and campaigns in particular, can help a commander acquire an operational perspective. It is the practical application of operational thinking in planning, preparing, and executing a major operation or campaign that allows the commander to anticipate and foresee the effects of his actions on the enemy and then take timely and proper counteractions.

Operational vision is the commander's ability to visualize the military conditions that will exist after the mission is accomplished. In essence, operational vision is the combination of a commander's personal traits, professional education, and experience that together are applied to ambiguous and uncertain situations. Imagination, anticipation, intuition, *coup d'oeil* (the innate ability to evaluate a situation quickly), introspective thought, and historical perspective are critical leadership elements necessary to envision all phases of an operation (or campaign) in support of the political leadership's decision to terminate hostilities, or to be able to operate effectively in the absence of perfect information. Without proper operational vision, the commander cannot translate the strategic objective assigned by political and military leadership into a military-strategic or theater-strategic objective.

On 3 April 2012, Chairman of the Joint Chiefs of Staff, General Martin Dempsey released a White Paper entitled "Mission Command" in which he outlined the requirement to "pursue, instill, and foster mission command" throughout the U. S. military. This concept, a notion based on decentralization of effort and speed of execution based on a commander's intent, will also be discussed in seminar. The commander's intent (one of the principal elements of the Commander's Estimate of the Situation) is a key link between operational vision and the successful employment of mission command.

The Chairman issued a second memorandum on 28 June 2013 entitled Desired Leader Attributes for Joint Force 2020, in which he approved a set of Desired Leader Attributes (DLAs) "as guideposts for joint officer leader development" to aid in efforts to "institutionalize the essential knowledge, skills, attributes, and behaviors that define our profession." How they relate to mission command and to the characteristics of operational commanders will be discussed in seminar.

The point of contact for this session is LTC Anthony New, USA, C-411.

D. Discussion Topics:

Describe some of the differences between operational thinking and operational vision.

At any level of command, commander's intent is the commander's vision. Describe some of the similarities and differences between the commander's vision and operational vision.

How does the study and application of operational art aid in developing a leader's ability to think "operationally"?

To what extent is mission command new? Explain the role and reciprocal nature of "trust" in the concept of mission command.

How can the services best develop ethical leaders comfortable and effective both in establishing and operating in this environment of "trust" in light of myriad challenges the services face today (i.e., Fiscal reality, force reductions, efficiency vis-à-vis effectiveness and so forth)?

What common characteristics and attributes do successful and unsuccessful operational commander's exhibit? Which, in your assessment, are the most important? How are they different than those of successful tactical level commanders?

How can the Services best apply experience, education, and training to develop leaders who possess the abilities outlined in the "Desired Leader Attributes for Joint Force 2020" and who are capable of thriving in an increasingly complex and uncertain operating environment?

Case Study Discussion Topics:

What set of leader attributes did operational leaders demonstrate during the War in the Pacific? How are they different from or similar to the Desired Leader Attributes (DLA) for Joint Force 2020?

Describe the leadership characteristics exhibited by the commanders in the case studies and how did they affect their exercise of command?

How did professional knowledge, education, and experience affect the decisions of the commanders?

What lessons can be derived from the leadership attributes of the commanders?

To what extent did the commanders exhibit characteristics associated with mission command? If not, what could they have done differently?

How would you assess the effectiveness of these commanders at the operational level?

E. Products:

Student led discussions of six historical case studies.

F. Required Readings:

U. S. Office of the Chairman, Joint Chiefs of Staff. Mission Command. White Paper. Washington, D.C.: CJCS, 2012. Read. (TSDM Students read this in Leadership Concepts 01). **(NWC 1193).**

_____. Desired Leader Attributes for Joint Force 2020. CJCS Memorandum, CM-0166-13, June 28, 2013. Review. **(NWC 1194).**

Vego, Milan. *Joint Operational Warfare: Theory and Practice*. Newport, RI: U. S. Naval War College, 2009. Read “Operational Leadership,” pp. X-5 to X-13; “Tenets of Operational Leadership,” pp. X-47 to X-48; “The Decisions,” pp. X-61 to X-71; “What Is Operational Thinking?” pp. XI-4 to XI-5; and “Operational Vision,” pp. XI-35 to XI-39. **(Issued).**

Case Studies:

Tomoyuki Yamashita:

Hoyt, Edwin P. *Three Military Leaders: Heihachiro Togo, Isoroku Yamamoto, Tomoyuki Yamashita*. 1st ed. Tokyo: Kodansha International, 1993. “Tomoyuki Yamashita and the Army Militarists,” Read pp. 119-127, “The End of a National Hero,” pp. 153-157. **(NWC 4105).**

Reel, A. Frank. *The Case of General Yamashita*. Chicago, IL: University of Chicago Press, 1949. “The War through the Enemy’s Eyes,” Read pp. 12-13, 16-26. **(NWC 4108A).**

Walter Krueger:

McDonald, Major John H. (USA) “General Walter Krueger: A Case Study in Operational Command.” Research paper, Fort Leavenworth: School of Advanced Military Studies, 1989. “General Walter Krueger–The Case Study (excerpt).” Read. **(NWC 4146B).**

Taaffe, Stephen R. *Marshall and His Generals: U. S. Army Commanders in World War II*. Lawrence, KS: University of Kansas Press, 2011. Read pp. 33-36, 212-220. **(NWC 4103).**

Takeo Kurita:

Thomas, Evan. *Sea of Thunder: Four Commanders and the Last Great Naval Campaign, 1941-1945*. New York: Simon & Schuster, 2006. Read pp. 74-80 and pp. 173-187. (NWC 4136).

William Halsey, Jr.:

Reynolds, Clark G. "William F. Halsey, Jr.—The Bull (1882-1959)." In *The Great Admirals: Command at Sea, 1587-1945*, ed. by Jack Sweetman. Annapolis, MD: Naval Institute Press, 1997. Read pp. 482-505. (NWC 4137).

G. Supplementary Readings:

Blumenson, Martin and James L. Stokesbury. *Masters of the Art of Command*. Boston: Houghton Mifflin, 1975.

Bradley, General Omar N. "On Leadership." *Parameters* XI (September 1981): 2-7.

Czege, Huba Wass de. "A Comprehensive View of Leadership." *Military Review* (August 1992): 21-29.

Gardner, Gregory C. "Generalship in War: The Principles of Operational Command." Research paper, Fort Leavenworth, KS: School of Advanced Military Studies, U. S. Army Command and General Staff College, 4 May 1987.

Gerner, Mark, H. "Leadership at the Operational Level." *Military Review* (June 1987): 26-35.

Meigs, Montgomery C. "Generalship: Qualities, Instincts, and Character." *Parameters*, 31, no. 2 (Summer 2001): 4-17.

Slim, Sir William. "Higher Command in War." U. S. Army Command and General Staff College, Fort Leavenworth, KS. 1970, 1-10.

Summers, Harry G., Jr. "Leadership in Adversity: From Vietnam to Victory in the Gulf." *Military Review* (May 1991): 2-9.

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**A CRITIQUE OF DOCTRINE:
U. S. DOCTRINE AND OPERATIONAL ART (Seminar)**

Thus it has come about that our theoretical and critical literature, instead of giving plain, straightforward arguments in which the author at least always knows what he is saying and the reader what he is reading, is crammed with jargon, ending at obscure crossroads where the author loses his readers.

—Carl von Clausewitz, *On War* 1832

A. Focus:

The focus of this seminar is on the employment of our critical thinking skills in a well-reasoned critique of select U. S. joint and services doctrines. This critique will be viewed through the lens of theory, specifically the operational art theory that we have discussed thus far. As Clausewitz said so eloquently in Book Two, Chapter 5 of, *On War*: “Critical analysis being the application of theoretical truths to actual events, it not only reduces the gap between the two but also accustoms the mind to these truths through their repeated application. We have established a criterion for theory, and must now establish one for critical analysis as well.” This seminar is our opportunity to do so.

B. Objectives:

- Using critical thinking skills, critique selected service and joint doctrine using your knowledge of operational art.
- Value the role of military theory in doctrine development and employment of forces in combat.

C. Background:

In the military use of the term, *doctrine* is understood as a set of commonly held, concisely stated, and authoritatively expressed beliefs, fundamental principles, organizational tenets, and methods of combat force employment intended to guide the planning, preparation, and execution of one’s forces to accomplish given military objectives. Its main purpose is to provide a military organization with a common philosophy, a common language, a common purpose, and unity of effort. Doctrine is a bridge between military theory and practice. It translates theoretical ideas into doctrinal principles. These principles are then used to devise tactics, techniques, and procedures. Doctrine codifies the services or joint community’s latest thoughts on warfare.

In general, a *service doctrine* should provide broad guidelines for the employment of one’s service forces to accomplish operational objectives through the planning, preparation,

and conduct of *major operations*. A properly written service doctrine should explain in some detail the employment of the numbered or theater forces at the *operational level of war* as part of a joint or combined force. It should provide a clear linkage between the operational and tactical levels on one hand and the strategic level of war on the other.

A sound doctrine should be based on military theory. At the same time it should also take current and projected technological advances fully into account. However, it should never be predominantly or, even worse, exclusively based either on theory or on the new technologies. The theoretical concepts should be based on certain principles derived from the multitude of examples from military history. Afterward, doctrine should be developed in consonance with theory. If a doctrine neglects the available historical experience, it may become disconnected from reality—that is, those universal truths that Carl von Clausewitz considered the bedrock of theory. A sound doctrine needs always to be grounded on historical realities.

Based on the Goldwater-Nichols Defense Reorganization Act of September 1986, the Chairman of the Joint Chiefs of Staff (CJCS) is responsible for the development, review, approval, and maintenance of joint doctrine and joint tactics, techniques, and procedures (JTTP). The Director, Joint Force Development Directorate, Joint Staff (J-7) is responsible to CJCS for the joint doctrine development process. Joint doctrine is coordinated with the Services, Combatant Commands, and the Joint Staff. All joint doctrinal publications must be approved by CJCS. Each Service must ensure that its doctrine and procedures are in consonance with joint doctrine. Service headquarters (including the U. S. Coast Guard) are responsible for the development of their doctrine.

The process of developing and writing U. S. joint and service doctrine involves large numbers of people and organizations. It also requires a considerable amount of time for completion of this process. The final version of a given doctrinal document represents a compromise among competing individuals and their organizations/institutions. Hence, a joint or Service doctrine may or may not represent the best ideas on a given subject.

U. S. joint and service doctrine contains numerous terms and their definitions referring to aspects of operational art. However, there are sometimes considerable differences between Joint and Service doctrinal documents. The principal joint doctrinal publications pertaining to the operational level of war are JP 3-0 *Unified Land Operations* and JP 5-0 *Joint Operation Planning*. Both of them and the U. S. Army's ADRP 3-0 *Operations* properly define what constitutes a major operation; while the U. S. Air Force and the U. S. Navy's doctrinal equivalents do not. Although the effects-based approach to operations (EBAO) was officially abandoned by the USJFCOM some years ago, a systems approach to situation assessment was for some reason retained. This, in turn, led the authors of JP 3-0/JP 5-0 to explain the concept of center of gravity partly in generic and partly in systems-centric terms. Students are forewarned that in reading joint and service doctrine a critical eye is necessary to discern the subtle, yet significant differences between what is doctrine and what is theory.

The point of contact for this session is Lt Col Mike LePage USAF, C-403.

D. Discussion Topics:

Describe the differences between the way U. S. joint/service doctrine and operational warfare theory explains the theater structure and geometry.

Discuss the differences and omissions in how U. S. joint and Army/Marine Corps doctrine describe methods of combat forces' employment. Do the U. S. Navy and the U. S. Air Force recognize major operations as a method of combat forces' employment?

What are the differences between the concept of center of gravity in U. S. joint doctrine and service doctrines? Are the key nodes centers of gravity? Why or why not?

To what extent does U. S. joint doctrine address the Clausewitzian concept of point of culmination? How do service doctrines describe the point of culmination?

What are the key differences between the operational functions described in operational warfare theory and those listed in JP 3-0, *Operations*?

What are the differences in describing the elements of operational design between operational warfare theory and the U. S. joint doctrine, specifically JP 3-0 and JP 5-0?

E. Products:

None.

F. Required Readings (these readings will be assigned with specific page numbers by your moderator team):

Department of the Air Force. Annex 3-0: *Operations and Planning*. Government Printing Office: Washington, D.C. 9 November 2012.

Headquarters, Department of the Army. ADRP 3-0: *Unified Land Operations*. Government Printing Office: Washington, D.C. May 2012.

Headquarters, United States Marine Corps. MCDP 1: *Warfighting*. Government Printing Office: Quantico VA. 20 June 1997.

Headquarters, United States Navy. Naval Doctrinal Publication 1: *Naval Warfare*. Government Printing Office: Washington, D.C. March 2010

U. S. Chairman of the Joint Chiefs of Staff. Joint Publication 1: *Doctrine for the Armed Forces of the United States*. Government Printing Office: Washington, D.C. 25 March 2013.

_____. Joint Publication 3-0: *Joint Operations*. Government Printing Office: Washington, D.C. 11 August 2011.

_____. Joint Publication 3-13.4: *Military Deception*. Government Printing Office: Washington, D.C. 26 January 2012.

_____. Joint Publication 4-0: *Joint Logistics*. Government Printing Office: Washington, D.C. 16 October 2013.

_____. Joint Publication 5-0: *Joint Operation Planning*. Government Printing Office: Washington, D.C. 11 August 2011.

G. Supplementary Readings:

U. S. Chairman of the Joint Chiefs of Staff. Joint Publication 1-01: *Joint Doctrine Development System*. Government Printing Office: Washington, D.C. 5 July 2000.

_____. Joint Publication 2-0: *Joint Intelligence*. Government Printing Office: Washington, D.C. 22 October 2013.

_____. Joint Publication 1-02: *Department of Defense Dictionary of Military and Associated Terms (amended through November 2015)*. Government Printing Office: Washington, D.C. 8 November 2015.

_____. Joint Publication 3-13: *Information Operations*. Government Printing Office: Washington, D.C. 17 November 2012.

_____. Joint Publication 3-13.2: *Military Information Support Operations*. Government Printing Office: Washington, D.C. 7 January 2010.

INTRODUCTION TO NAVAL WARFARE THEORY (Seminar)

Knowledge of naval matters is an art as well as any other and not to be attended to at idle times and on the by . . .

—Pericles, 460 BC

A. Focus:

The foci of this session are on explaining the nature and character of naval warfare, the differences between wars at sea and those on land, and warfare conducted on the Open Ocean and war in the littorals. It will also present in broad terms the principal objectives of naval warfare, which we will discuss in greater detail in subsequent seminars.

B. Objectives:

- Understand the character of naval warfare.
- Comprehend in broad terms the principal objectives of naval warfare.
- Comprehend the effect of new technologies on the character of war at sea.
- Discern the key differences between wars at sea and wars on land and a war on the open ocean and in the littorals.
- Comprehend mutual relationship between war on land and at sea.
- Understand the key aspects of the offense and the defense in a war at sea.
- Know the importance of close cooperation (joint warfare) between a navy and other services of the armed forces.

C. Background:

Students have come to appreciate the manner in which theoretical terms are often misused in U. S. joint doctrine, in service manuals, and in the conversations among professionals. As we have come to appreciate in our journey through the theory of operational art that words do matter. They are the glue that binds a profession together and in combat, a misunderstood term can, and as we have seen in our study of the Battle of Leyte Gulf, lead to potential disaster. It is essential that as graduates of the *Naval War College*, students speak the unique language of maritime warfare.

Like warfare in general, naval warfare is shaped by human nature, the complexities of human behavior, and the limitations of human and physical conditions. The material and psychological aspects of a war form an organic whole. In contrast to war on land, war at sea (and war in the air) is directed to a greater extent against the enemy's materiel. Nevertheless, to paraphrase Clausewitz, war at sea cannot be considered in purely material terms. The

employment of one's naval forces is never directed against material force alone but is always aimed simultaneously at moral forces.

The character of naval warfare in general is primarily determined by the prevailing international relations, domestic politics, economic, social, demographic, religious, legal, and other conditions in a certain era and also, last but not least, the influence of new technological advances. War at sea is generally influenced to a much greater extent than war on land with technological advances. Law of the sea also greatly affects character of naval warfare. In addition, war at sea is also influenced with the changes in the character of war on land and in the air.

Like war on land, naval warfare can be conducted using offensive, defensive, or a combination of these methods. However, the overall posture and progress of the war on land will determine whether one's naval forces would be on the strategic offensive or defensive. A side on the strategic offensive on land and having a stronger navy would try to obtain and maintain sea control at the strategic level. At the same time, the weaker side on land would be forced on the strategic defensive at sea.

Clausewitz insisted that defense is a stronger form of fighting than attack. Among its weaknesses, the offensive requires a large superiority of one's forces over the defender. He wrote that the weaker the motives for action, the more will they be overlaid and neutralized by the disparity between attack and defense. The superiority of strategic defense is based on the fact that the attack itself cannot exist without some measure of defense. However, his dictum that "attack [is] the weaker and defense the stronger form of war" is not fully applicable to naval warfare (and war in the air too). For one thing, the stronger navy has to be on the offensive if it aims to obtain and then maintain sea control in a given part of a theater.

Naval warfare in the littorals has many commonalties with, but also differences from, war conducted on the open ocean. Among other things, waters and airspace in the littorals, and enclosed and semi-enclosed seas (collectively called "narrow seas"), are often confined. In a typical narrow sea, many offshore islands, shoals, and reefs, combined with strong currents and high tides, make navigation in the littoral waters extremely difficult and dangerous. In many littorals, it is commonplace to operate in the presence of multilayered, possibly sophisticated, defenses. The weaker opponent at sea may not operate in the way one expects and he may use asymmetric responses to neutralize or even nullify the advantages normally enjoyed by a blue-water navy. Waters in a typical narrow sea are cluttered because of the presence not only of the enemy's and friendly forces but also those of the neutrals. In a typical narrow sea, density of maritime traffic is generally high, especially in the straits/narrows and the proximity of large ports. It is difficult to differentiate between friend and foe, because of the presence of a large number of commercial vessels, ferries, and fishing boats.

In generic terms, the principal objectives of war at sea are sea control, sea denial, chokepoint control/denial, basing/deployment area control, and destroying/weakening the enemy's and defending/protecting friendly military-economic potential at sea. A stronger side would generally try to obtain/maintain and exercise sea control, while the weaker side would attempt to dispute or contest that control.

In the modern era, success in war requires the closest cooperation among the services. The political objective determines the role and relative importance of each service in a war. The navies and air forces play a supporting role because the outcome in a war is ultimately

decided on land. Yet a high-intensity conventional conflict cannot be ultimately won without control of the sea and the air. Hence, the success of each service in war is critically dependent on the support of the other, sister services.

The sessions that follow will investigate the concept of sea control and how gaining and exploiting it provides the stronger side with significant advantage. We will understand how the weaker side contests sea control and the relationship between actions at sea and actions on land. We will study how maritime force commanders employ sea power in attaining objectives. This study will include selected aspects of anti-surface warfare, anti-submarine warfare, naval counter-air warfare, amphibious warfare, mine warfare and maritime trade warfare. We will examine the requirements in designing major naval / joint operations. Additionally, we will conduct a tabletop exercise analyzing a series of naval struggles in the battle for Guadalcanal and complete a practical exercise on the Falklands/Malvinas conflict.

The point of contact for this session is Professor Milan Vego, C-427.

D. Discussion Topics:

Discuss the key elements of nature and character of warfare at sea. Describe the role of the human factor in naval warfare.

Explain the main differences in the conduct of war on land and at sea.

Describe the mutual relationship between war on land and at sea.

What are the main differences in conducting a war on the open ocean and in the littorals?

Discuss in generic terms the main objectives of naval warfare.

How do new technologies affect the theory and practice of war at sea?

E. Products:

None.

F. Required Reading:

Till, Geoffrey. *Seapower: A Guide for the Twenty-First Century*. 3d ed. New York: Routledge, 2013. Read pp. 79-86. **(Issued)**.

Vego, Milan. *On Naval Theory*. Newport, RI: Naval War College, August 2015. **(NWC 1101)**.

G. Supplementary Readings:

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THE MARITIME ENVIRONMENT (Seminar)

The first and most obvious light in which the sea presents itself from the political and social viewpoint is that of great highway; or better, perhaps, of a wide common, over which all men may pass in all directions.

—Captain Alfred T. Mahan, USN
The Influence of Sea Power Upon History, 1890

A. Focus:

The focus of this session is to describe the components of the maritime environment and their effect on the planning and execution of major naval/joint operations. Emphasis is placed on the physical differences between open-ocean and littoral environments.

B. Objectives:

- Understand the main effects of physical environment and weather/climate on the employment of maritime forces.
- Comprehend the fundamental physical oceanographic properties and differences between the Open Ocean and littoral environments.
- Understand the threats unique to littoral environments, and how these influence joint planning and operations.

C. Background:

The maritime environment is influenced by, indeed it drives, the earth's climate. Unlike weather that concerns daily and weekly conditions of more tactical relevance, climate deals with long-term averages. The differential heating of the earth causes seasonally predictable patterns of weather and oceanographic conditions that, at the operational and strategic level, are of use to the planner or commander.

The maritime environment is an extraordinarily complex environment in which to operate. First, the distances can be vast. The oceans cover more than 70% of the earth, with the Pacific Ocean covering nearly a third of the area. Second, the oceans experience very diverse undersea conditions analogous to the earth's climate regimes. As all military sensors are dependent upon the physical properties of the environment in which they work, understanding these properties is critical to determining their effectiveness. Finally, the sea surface is dramatically influenced by the local weather as well as storms thousands of miles away.

Physical oceanography is the science of understanding the processes that govern the seas and help us to characterize the environment. Water is virtually opaque to light and radio waves so sound is the primary means of sensing the undersea environment. Sound does not travel in straight lines underwater, but is instead bent in predictable ways depending on the properties of the water through which it travels. Knowledge of the physical properties to include temperature, pressure, and salinity, allow us to model how sound will propagate and determine optimum placement of sensors, and to estimate the range at which we will detect an acoustic signal. On the surface, waves can be created by local winds or storms thousands of miles away, and will travel with little loss of energy over extraordinary distances until reaching land. Understanding the combination of environmental factors: sea heights, bathymetry, thermal structure of the water column, salinity, currents, etc., enable us to determine where and when it is safe to operate, where our adversary may operate and how our military sensors will perform. Environmental conditions will determine the feasibility to launch aircraft, stream a towed array, direct an amphibious landing, and conduct anti-submarine warfare. Conditions will further determine the effectiveness of masking forces from submarines as well as conducting anti-submarine warfare.

As low-lying and mountainous areas in the same geographic region on land have different physical characteristics, so do coastal/littoral and open ocean areas have different characteristics. Obviously coastal/littoral areas are generally shallow while open ocean areas are deep. But what does this mean for navy planners? An eight foot swell in the open ocean is no concern for most modern naval vessels, but if coming ashore, an eight foot swell could preclude amphibious and small boat operations. In deep ocean waters, poor charts are of relatively little concern for surface vessels, but in shallow littoral waters, uncharted reefs, rocks, and shoals provide significant dangers to naval forces. Additionally, the structure of open ocean water and littoral water columns are different. Open ocean deep water generally provides good, long-range acoustic conditions; littoral waters are highly variable with poor acoustics, eddies, and varying bathymetry. A smart submarine commander operating in the environment with intimate knowledge of his water conditions can hide within an eddy or behind a submerged ridge and lie in ambush of enemy forces. Deep water provides a relative haven from mines whereas littoral waters provide opportunities to seed bottom-moored minefields capable of sinking very large warships.

Finally, 40 percent of all the world's cities with populations of 500,000 or more are on the coast, while more than two-thirds of the world's population lives within 250 miles of the coast. These built-up coastal areas and accompanying civilian infrastructure can also harbor coastal defenses. Small boats that cannot operate effectively on the open ocean can be formidable in shallow littoral waters, operating close to home ports from which they can rapidly sortie and retreat. Coastal guns and surface-to-surface missiles also provide significant dangers, as clearly demonstrated in 2006 when the Israeli vessel *Hanit*, while operating more than 30 nm off shore, was struck by a ground launched C-802 anti-ship cruise missile fired from the back of a truck. Coastal infrastructure and efforts to minimize civilian casualties may preclude many of the offensive and defensive tools of the naval commander. Operational planners and commanders must consider these factors when transitioning from open-ocean to littoral activities.

The environment influences nearly all aspects of naval operations. The ability to operate safely, the enhancement or degradation of combatant sensors, and the relatively mundane task of locating forces operating in the maritime domain are all driven by environmental conditions. With this in mind, a fundamental understanding of what conditions can be expected, and how they will impact both friendly and adversary performance, is critical to the joint force and naval commanders.

The point of contact for this session is Commander Mike Loomis, C-408.

D. Discussion Topics:

Discuss the main characteristics of the physical environment and their effect on the employment of maritime forces.

Discuss the difficulties of detecting and identifying forces in the maritime domain.

What are the main differences between the combat employment of naval forces on the open ocean and in the littorals?

Discuss the principal influences of weather/climate on the employment of naval forces.

How can the operational commander incorporate climate in his/her planning?

Discuss the effect of growing urbanization in the littorals on the employment of maritime forces in combat.

E. Products:

None.

F. Required Readings:

Atkinson, Rick. *Crusade: The Untold Story of the Persian Gulf War*. Boston: Houghton Mifflin Company, 1993. Read pp. 169-173, 237-240. (NWC 4151).

Freedman, Lawrence. *The Official History of the Falklands Campaign Vol. II*. New York: Routledge, 2005. Read pp. 75-80, 206-207. (NWC 4150).

Woodward, Admiral Sir John and Patrick Robinson. *One Hundred Days: The Memoirs of the Falklands Battle Group Commander*. London: Harper Collins, 1992. Read pp. 63-68, 104-106, 184-194. (NWC 4148).

G. Supplementary Readings:

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- Rodriguez, Jean-Paul, Claude Comtois, and Brian Slack, *The Geography of Transport Systems*. London/New York: Taylor & Francis Group, Routledge, 2nd ed., 2010.
- Till, Geoffrey. *Seapower: A Guide for the Twenty-First Century*. 3d ed. London and New York: Routledge, 2014.

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Vego, Milan. “Physical Environment in the Littorals,” *Joint Operational Warfare: Theory and Practice*. Newport, RI: Naval War College, reprint, 2009. **(Issued)**.
Read pp. IV-35–IV-48.

Winters, Harold A. *Battling the Elements, Weather, and Terrain in the Conduct of War*. Baltimore, MD: Johns Hopkins University Press, 1998.

Yuan, Jingdong. *Emerging Maritime Rivalry in the South China Sea. Territorial Disputes, Sea-Lane Security, and the Pursuit of Power*. Sydney: International Security Research Programme, University of Sydney, September 2012.

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THE OBJECTIVES OF NAVAL WARFARE: CONTROL AND DENIAL OF THE SEA (Seminar)

[My operations] must depend absolutely upon the naval force which is employed in these sea . . . No land force can act decisively unless accompanied by a maritime superiority.

—General George Washington to the
Marquis de Lafayette, 15 November 1781

A. Focus:

This session considers the objectives of naval warfare—both on the open ocean and in the littorals—at the operational level of war. Sea control is the necessary condition that allows naval forces freedom of action to achieve military objectives in the face of an opposing force. This session will examine sea control and sea denial as a theoretical construct as well as the methods used by the stronger and weaker sides to obtain or deny sea control in a maritime theater.

B. Objective:

- Understand sea control and sea denial from a theoretical perspective.
- Analyze the theoretical and practical implications of sea control and denial in regard to operational factors and functions.
- Differentiate between the various degrees of sea control.
- Examine the main methods of obtaining, maintaining, and exploiting sea control.
- Understand the conditions for denying and disputing sea control.
- Comprehend the role and importance of other services in sea control and in denying it.
- Understand distinctions between denying control on the open ocean and in the littorals.

C. Background:

Strategic objectives determine the part to be played by each service in war; however achievement of strategic objectives normally requires employment of all the components of a country's armed forces. Therefore, war at sea should be considered not in isolation from but as intrinsically related to war on land and in the air. Wars can no longer be won by the efforts of a single service, requiring close service cooperation. In particular, the highest degree of cooperation among the services is necessary in conducting war at sea.

Historically, the principal objective of a fleet was to obtain and maintain what was called *command of the sea* (or *maritime supremacy* in modern joint terms). The meaning of this term has undergone significant changes owing to the advent of the submarine, aircraft,

and guided missiles. The term used today, *sea control* (or *sea superiority* in modern joint terms), more accurately conveys the true state of affairs in a war at sea. It requires some level of control in all three domains (air, surface, sub-surface) to assure one's own unfettered use or to deny such use to a strong and resourceful opponent. Sea control is the ability of one's fleet to operate with a high degree of freedom in a sea or ocean area for a limited period of time. The objective for a weaker opponent at sea would normally be that of *sea denial*. That is to challenge the unfettered access of a more powerful opponent, increasing their risk to operate in one or all of the domains.

Sea control, and the original concept of command of the sea, has been a fundamental maritime objective for hundreds of years. By maintaining control of strategically important areas of a maritime theater, the stronger fleet could secure the uninterrupted flow of friendly shipping, cut off enemy maritime trade, and project power onto the enemy shore. The real value of controlling the sea has not been the actual possession of a particular body of water but its subsequent exploitation toward the achievement of other objectives. The stronger maritime force leverages operational factors at sea to achieve its objectives while preventing the weaker maritime force from doing the same. Sea control can be expressed in various degrees—such as general, local, and temporary—that are relative to the operational factors of time, space, and force. As such, it is often incomplete and imperfect.

Sea control, considered the essence of sea power, is often a prerequisite for joint operations. Historically, sea control has been gained through various methods: destroying the enemy fleet at sea, destroying the enemy fleet in ports or bases, attrition, blockades, offensive mining, seizing choke points, blockading choke points, and seizing enemy bases. In the past, the most common method used to destroy the enemy fleet was by seeking a decisive battle at sea. After obtaining sea control, maritime forces consolidate operational or strategic success by maintaining and then exploiting sea control by projecting power ashore, destroying enemy coastal defenses and facilities, and degrading the enemy's military, political, and economic sources of power.

A weaker fleet is usually not able to go on the offensive but is forced to stay on a strategic defensive until the balance of forces shifts in its favor. Consequently, sea denial is normally the operational objective, in the maritime domain, for the weaker side during a war at sea. A weaker side may also try to dispute control in certain sea or ocean areas. Because no navy has unlimited resources and because a belligerent's near term objectives may not require significant use of the sea in a particular area, even a strong navy might opt or be forced to conduct sea denial. In the former case, once conflict in a primary theater has abated, sufficient forces may be brought into the secondary theater to enable a more offensive posture. If, at this point, the stronger navy has been sufficiently attrited or the weaker side has been sufficiently fortified, the objective for what had been the relatively weaker fleet might shift to obtaining and maintaining sea control in a certain part of the theater.

The point of contact for this session is Professors Steve Forand, C-407, Richard Shuster C-422, and Bill Hartig, C-428.

D. Discussion Topics:

What is sea control and why does one obtain it?

Does sea control exist in peacetime?

How are the terms “sea control” and “sea denial” related?

What tasks are associated with exercising sea control?

How can other services (air forces and ground forces) be employed in support of naval air to obtain/maintain and exercise control of the air/surface or deny that control?

Case Study Discussion Topics for Sea Control:

What were the U. S. operational objective(s) for Midway?

How would you evaluate the effectiveness of U. S. planning and execution in the struggle for sea control?

How much risk were the commanders willing to accept in order to obtain sea control?

Did any of the commanders use mission command or mission type orders?

What lessons learned can be derived from the case study?

Case Study Discussion Topics for Sea Denial:

Identify the U. S. and Japanese operational objectives.

Evaluate the effectiveness of U. S. and Japanese planning and execution in the struggle for local sea control.

How much risk were the commanders willing to accept in order to obtain sea control?

What lessons learned can be derived from the case study for modern commanders?

E. Products:

None.

F. Required Reading:

Vego, Milan. *Objectives of Naval Warfare*. Newport, RI: Naval War College, August 2015. Scan. (NWC 1102).

_____. *Obtaining and Maintaining Sea Control*. Newport, RI: Naval War College, August 2015. (NWC 1108).

_____. *Exercising Sea Control*. Newport, RI: Naval War College, August 2015. (NWC 1131).

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Case Study:

Department of the Navy, Naval Historical Center. The Battle of Midway 4-7 June 1942. Extracted from: U. S. Strategic Bombing Survey (Pacific): The Campaigns of the Pacific War. Read: Chapters 1, *Japanese Naval Planning* and V, *The Battle of Midway*. Washington, D.C.: Naval Historical Center. 27 April 2005. (NWC 4153).

G. Supplementary Readings:

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Mahan, Alfred Thayer. *The Influence of Sea Power Upon History, 1660–1783*. New York: Dover, 1987, reprint of 1890 edition.

Moineville, Hubert. *Naval Warfare Today and Tomorrow*. Oxford, UK: Basil Blackwell, 1983.

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Scheina, Robert L. *The Malvinas Crisis, Latin America: A Naval History 1810–1987*. Annapolis, MD: Naval Institute Press, 2003.

U. S. Navy. *Naval Operating Concept 2010 (NOC)*. Washington, D.C.: Government Printing Office. 2010.

Vego, Milan. *On Naval Warfare*. U. S Naval War College, Joint Military Operations Department: Newport, RI. 2009.

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COMBINED ARMS: FUNDAMENTALS OF ANTI-SURFACE WARFARE (Seminar)

There seems to be something wrong with our bloody ships today.

—Vice Admiral David Beatty,
31 May 1916, Battle of Jutland

A. Focus:

The following six sessions are intended to introduce the student to the concept of *naval combined arms*, the synergistic combination of fires from different domains and platforms intended to put an enemy on the horns of a dilemma. This session will focus on the objectives and methods of employing Anti-Surface Warfare (ASUW) forces in the struggle for sea control and in sea denial.

B. Objectives:

- Understand the role and importance of ASUW in obtaining, maintaining, and exercising or disputing sea control.
- Explain the main objectives and methods of combat employment of ASUW forces.
- Summarize the range of missions performed by ASUW forces at the operational level of war.

C. Background:

Anti-Surface Warfare is that segment of naval warfare that involves sensors, weapons, platforms, and targets in the surface environment. It also may be referred to as ASUW. If surface forces are the spine of a fleet then anti-surface warfare must play a pivotal role in the conduct of war at sea. With the proliferation of long range, supersonic anti-ship cruise missiles (ASCMs) capable of deployment from land, air and sea as well as the relatively recent development of anti-ship ballistic missiles (ASBMs) the threat to surface forces has never been greater. These developments are in addition to the historical threat from submarines, aircraft, and mines. Small craft, ranging from traditional fast missile and torpedo platforms to explosive laden boats operating in the littoral environment further complicate surface ship operations.

ASUW is practiced not only by naval forces as significant capabilities reside in the air and ground forces of several nations. Furthermore, targeting of surface forces may be accomplished by a number of means including, but not limited to, land based maritime patrol aircraft, long range land based sensors and the proliferation of maritime unmanned aerial and underwater vehicles.

As threats to surface forces have increased, ship survivability has not. Modern naval warship design predicated on mission requirements has made surface ships more vulnerable to damage from a variety of diverse weapons than their predecessors. Although the defensive capability of the surface combatant has been extended with the advent of the surface to air missile, current naval construction techniques have not increased the survivability of the ships themselves once damage has occurred. The day of the heavily armored surface combatant is over as these platforms have been replaced by lightly protected ships heavily reliant on their electronic capabilities (and the power sources that support them) for both defensive and offensive operations. In many cases a single hit by an ASCM or other weapon would be enough to disrupt such capabilities resulting in a mission kill if not the outright sinking of a surface vessel.

In response to this threat many navies have relied on a multi-faceted approach to defending surface forces. By using effective emission control techniques, counter-targeting and layered defense (utilizing both soft and hard kill systems) they have attempted to mitigate challenges associated with ASUW threats. Techniques and capabilities required to defeat air and subsurface threats are discussed in separate modules.

The point of contact for this session is Commander Dan Caldwell, C-414.

D. Discussion Topics:

Discuss the objectives and main methods of employment of ASUW forces in obtaining, maintaining, and exercising or disputing sea control.

How do joint forces increase the effectiveness of ASUW efforts?

How is the ASUW threat increased in the littorals?

How does the operational commander accept risk in the ASUW area to balance his objectives and force constraints to achieve success?

E. Products:

None.

F. Required Reading:

Erickson, Andrew S. and David D. Yang. *Using the Land to Control the Sea? Chinese Analysts Consider the Anti-ship Ballistic Missile*. Naval War College Review, Autumn 2009. (NWC 4145).

Mahnken, Thomas G. *The Cruise Missile Challenge*. Center for Strategic and Budgetary Assessments. March 2005. Read: pp. 1-19 and 31-39. (NWC 1135).

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Winnefeld, James A. *Surface Ships Survivability: An Enduring Issue*. Naval War College Review. May–June 1983. (NWC 1136).

G. Supplementary Readings:

Bollinger, Martin J. *Warriors and Wizards: Development and Defeat of Radio-Controlled Glide Bombs of the Third Reich*, Annapolis, MD: Naval Institute Press 2010.

Dyke, David H. *Four Weeks in May: The Loss of “HMS Coventry”*. Atlantic Books 2007.

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COMBINED ARMS: FUNDAMENTALS OF ANTI-SUBMARINE WARFARE (Seminar)

My Navy has been definitely slack in preparing for this submarine war off our coast. As I need not tell you, most naval officers have declined in the past to think in terms of any vessel of less than two thousand tons. You learned the lesson two years ago. We still have to learn it.

—President Franklin Roosevelt in a letter to
British Prime Minister Winston Churchill
during the Battle of the Atlantic, 1942

A. Focus:

This session focuses on the objectives and methods of employing Anti-Submarine Warfare (ASW) forces in the struggle for control of the sea or in sea denial operations.

B. Objectives:

- Understand the role and importance of ASW in obtaining, maintaining and exercising or disputing sea control.
- Comprehend the main objectives and methods of combat employment of ASW forces.
- Comprehend the range of missions performed by ASW forces at the operational level of war.
- Comprehend the capabilities of joint services in obtaining, maintaining and exercising or disputing sea control.

C. Background:

Technological innovations have continued to expand submarine capabilities and therefore complicated how to counter the undersea threat. At the start of the First World War, efforts to counteract enemy submarines were obscure. One hundred years later, much of this uncertainty remains, yet the objectives of ASW have been remarkably consistent over time. Navies have attempted to destroy enemy submarines, limit their effectiveness or contain their deployment. By mitigating the offensive powers of the enemy, friendly forces were able to accomplish sea control in specific areas and achieve their objectives. Conversely, by using powerful ASW forces navies could prevent enemy subsurface forces from operating in an area. ASW will continue to be a vital component in any maritime force's attempts to obtain, maintain and exercise or dispute sea control.

ASW can be characterized as a race between submarine warfare capabilities and tactics to counter such capabilities. Many of the tactical methods of neutralizing submarines

have varied as naval forces have attempted to use advanced technology to deal with the subsurface threat. Navies have employed hunter-killer groups to actively seek out submarines, sent disguised merchant ships to attack unwary surfaced submarines, mined submarine harbors and operating areas to restrict access, and used patrolling aircraft and blimps to search for and attack patrolling submarines. During World War II, convoying vessels proved to be the most effective way to diminish the effectiveness of submarines and allow friendly forces to achieve their objectives.

Modern ASW has progressed well beyond dropping depth charges on German U-Boats and must be viewed as a systematic approach to defeating a very difficult threat. The tension between submarine capabilities and ASW has driven innovation in the undersea domain. The Cold War battle between the United States and the Soviet Union saw many innovations in submarine warfare and ASW. Between 1945 and 1950, the Soviets adapted the German Type XXI diesel-electric submarine with features such as increased battery capacity, a hydrodynamic hull design for a higher underwater speed and a snorkel mast permitting the intake of air to operate the diesel engine while submerged at periscope depth. These innovations effectively countered the ASW techniques during that period and drove the development of new radar and underwater detection capabilities. The passive acoustic array and fixed seabed array were developed as well as improved sonar performance. From 1950 to 1960, the first nuclear submarines were launched introducing speed and endurance. Nuclear weapons were also developed and the submarine became a survivable nuclear weapon launch platform. These developments greatly complicated the ASW problem and increased the importance of passive detection and ocean surveillance. The first high performance nuclear submarines were launched between 1960 and 1980. During this period the United States submarine force enjoyed a substantial acoustic advantage over the Soviets and exploited the effective use of fixed arrays such as Sounding and Surveillance Systems (SOSUS) along with the significant U. S. submarine detection ranges of enemy submarines. High performance nuclear submarines drove the innovation of Advanced Capability (ADCAP) Heavy Weight Torpedoes (HWTs) that had much higher speeds and post-launch wire guidance control. The final phase of Cold War ASW was the development of very quiet nuclear submarines from 1980 to the end of the Cold War. This trend has continued and resulted in near acoustic parity that Admiral Kinnard McKee predicted while he was the Director of Naval Nuclear Propulsion in 1986.

"Eventually, U. S. and Soviet submarine capabilities will converge. Then we will have to think about different applications for submarines because ASW is only going to become a defensive business for submarines in my judgment. It will be blind man's bluff with other submarines...Many of the other roles for submarines will become more predominant as we go further into the future, because at some point, nobody will be able to find a submarine with anything."

-Admiral Kinnard McKee, USN
Subcommittee of the Committee on Appropriations,
U. S. House of Representatives,
Department of Defense Appropriations for 1987, April 1986.

The submarine is very effective in the detection and destruction of enemy submarines simply because it operates in the same environment as the threat. However, as Admiral McKee predicted, we are at a point where even modern submarines are not be able to adequately detect a comparable threat submarine. Countering innovations such as nuclear propulsion, cruise missiles, submarine-launched ballistic missiles and quiet diesel-electric and nuclear submarines requires a broad, operationally based joint ASW effort to be successful. The integration of non-navy assets is an important part of joint and coalition ASW operations. ASW is one of the most difficult and complex problems in naval warfare. In addition to large areas, complex and variable environments and an immense demand on time and resources, the increased emphasis on operations in the littorals further complicates this already difficult problem. Commanders must not limit their perspectives to a single avenue of approach. Otherwise, attempts to obtain, maintain, and exercise or disrupt sea control will take much longer and require more resources.

At the operational level of war, maritime commanders have undertaken various courses of action to degrade the enemy submarine threat. Attempting to defeat the submarine threat in the submarine construction sites or training areas, the transit routes to their patrol areas, or while on station require different methods and decisions for the joint commander. Commanders who concentrated on only one of these methods, or focused only on the use of maritime forces to degrade enemy capabilities, limited the effectiveness of their joint effort. Land based air, ground, and cyber forces also play an important role in defeating the enemy, or at least minimizing the enemy's potential and allowing friendly forces to achieve their objectives.

Exercising control over the subsurface allows the exploitation of the operating area by other maritime forces to accomplish vital objectives. Essential maritime trade could be conducted, amphibious forces could travel to their landing sites, or nuclear missile launching submarines could be protected in bastions. Denying that same capability to the enemy allows one force to prosecute the conflict more rapidly, maintaining the initiative in the maritime and consequently terrestrial realm.

Concurrently, the use of other elements of national power—particularly the security of friendly information sources or the exploitation of enemy ones—have been crucial in obtaining success; allied success in both World Wars in defeating German U-boat offensives in the Atlantic was due in no small part to the sheer size of available ASW forces and the massive numbers of merchant ships produced, as well as the exploitation of German signal traffic. There are no panaceas in ASW, but focusing on the required operational objectives and using all elements of the joint force provide a greater opportunity to achieve success.

The point of contact for this session is Captain Eric Irwin, USN, C-423.

D. Discussion Topics:

Discuss the objectives and main methods of employment of ASW forces in obtaining, maintaining, and exercising or disputing sea control.

How do joint forces increase the effectiveness of ASW efforts?

How can operational functions be utilized to counter the submarine threat? Discuss the best ways to synchronize and sequence these functions to produce a viable ASW scheme?

What are the challenges of conducting ASW in the littorals?

Discuss the human factor as it applies to the art of ASW.

How does the presence of an adversary's submarine force influence operational factors?

How does the relationship between these factors affect ASW?

How does the operational commander accept risk in the ASW area to balance his objectives and force constraints to achieve success?

E. Products:

None.

F. Required Readings:

Breemer, Jan S. "Chasing U-Boats and Hunting Insurgents." *Joint Force Quarterly*, 40 (1st Quarter 2006): 60-66. (NWC 4080)

Gordon, John J. and Chester Helms. U. S. Naval War College. Joint Military Operations Department. "Operational ASW." Newport, RI: Naval War College, 2011. (NWC 4030).

United States Naval War College, Joint Military Operations Department. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. (NWC 2164).

Vego, Milan. "Fundamentals of Antisubmarine Warfare (ASW)" U. S. Naval War College: Newport, RI, 2012. Read pp. 1- 16, scan pp. 17-33. (NWC 1081).

G. Supplementary Readings:

Blair, Clay. *Hitler's U-Boat War: The Hunters, 1939-1942*. New York, Random House, 1996.

Burgess, Richard R. "'Awfully Slow Warfare'." *Seapower* 48, no. 4 (April 2005): 12-14.

Cote, Owen R. Jr. *The Third Battle: Innovation in the U. S. Navy's Silent Cold War Struggle with Soviet Submarines*. Newport Papers no. 16. Newport, RI: Naval War College Press, 2003.

Haydon, Peter. "Is Anti-Submarine Warfare Dead?" *Canadian Defense Quarterly* (May 1993): 15-23.

Oi, Atsushi. "Why Japan's Antisubmarine Warfare Failed." *United States Naval Institute Proceedings* 78, no. 6 (June 1952): 587-601.

Polmar, Norman and Kenneth J. Moore. "Cold War Strategic ASW." *Undersea Warfare*. (Summer 2005): 20-24.

Vego, Milan. "Antisubmarine Warfare (ASW) in the Littorals." U. S. Naval War College. Joint Military Operations Department. Newport, RI: Naval War College, 2010.

_____. "A Short History of Antisubmarine Warfare (ASW), 1914-1945." U. S. Naval War College. Joint Military Operations Department. Newport, RI: Naval War College, December 2013.

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COMBINED ARMS: FUNDAMENTALS OF NAVAL COUNTER-AIR WARFARE (Seminar)

We can arrive at a true picture of the role of aircraft carriers in naval operations only if we consider the airplane to be a fighting tool of fighting men on fighting ships, only if we clearly recognize at the onset that the aircraft carrier is just as surely a fighting ship as is a gun carrier or a torpedo carrier.

—LCDR Bruce G Leighton USN, 1928

A. Focus:

This session is designed to introduce the US Navy's range of capabilities and fleet tactics as they relate to Counter-air Warfare. The focus is on the Carrier Air Wing contribution; however, Counter-Air Warfare is a team sport. As such, the Carrier Air Wing must be understood as one of several tools that include the Carrier Strike Group surface ships as well as sister service capabilities. As the range and lethality of our potential enemies' increases, the combat employment of naval forces in the littorals is the most valid framework for the naval Counter-air Warfare discussion.

B. Objectives:

- Understand the doctrinal definitions and relationships of Counter-Air Warfare, Air and Missile Defense, Offensive Counter-Air warfare, and Defensive Counter-Air Warfare.
- Understand the theoretical framework for Counter-Air Warfare.
- Understand the relationship between Air Superiority and Sea Control.
- Appreciate the impact of threat capabilities.
- Understand the implications of achieving Sea Control with and without Air Superiority.
- Comprehend the influence of the littoral environment on Naval Counter-Air Warfare.
- Understand the combined arms platforms and coordination necessary to effectively execute Naval Counter-Air.

C. Background:

The threats to modern navies are numerous and diverse. Of all the domains in which to fight and win on the oceans, modern navies must be prepared to defend itself from a mix of sea and shore based anti-ship cruise missiles, anti-ship ballistic missiles, fighter/attack aircraft and armed unmanned aerial vehicles. The proliferation and lethality of modern naval weapons pose a growing threat to maritime operations.

Counter-air warfare is conducted not as an end in itself. Rather, it is a concept designed to protect naval forces from air attack, in order for friendly forces to execute missions to include, but not limited to: the support of ground operations (either directly or by independent strike warfare), defense of friendly territory from maritime attack, or protection of maritime trade. Capital ships of a naval force, historically the aircraft carrier, are likely the main targets of enemy air attacks. The naval commander must balance the inherent tension between utilizing assets to protect the carrier and using the offensive punch of the carrier air wing. A carrier strike group that is focused on self-protection alone adds little to achieving military objectives. Furthermore, the strike group commander may have additional requirements to protect other forces, as in detached surface forces or maritime shipping, further complicating the balance between offense and defense.

The point of contact for this session is Commander Charles Broomfield, MLH-136.

D. Discussion Topics

Discuss counter-air warfare tactics at the theoretical level. Remove specific weapons systems from the discussion. Consider the Objective, Purpose, and Methods vis-à-vis counter-air warfare.

Explain the difference between Offensive Counter-air and Defensive Counter-Air.

Discuss the broad threats that counter-air acts against.

Discuss the counter-air capabilities resident in a Carrier Strike Group (CSG).

Discuss the operations area geography impact on the employment of CSG counter-air capabilities.

Consider Vego's concepts associated with gaining, maintaining, and exploiting sea control and the implications to counter-air warfare.

Discuss the integration of joint force capabilities in support of CSG counter-air warfare.

E. Products:

None.

F. Required Readings:

Holmes, James M. "The Counter-air Companion, A Short Guide to Air Superiority for the JFC." *Air University Press*, April 1995. Read pp. 35-40, 60-61, scan the rest. (NWC 4149).

O'Neil, William D. "Naval Anti-air Warfare." *National Defense* LXV, no. 365 (February 1981). (NWC 1137).

United States Naval War College, Joint Military Operations Department. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. (NWC 2164).

U. S. Office of the Chairman of the Joint Chiefs of Staff. Joint Publication (JP) 3-01, *Countering Air and Missile Threats*. Washington, D.C.: CJCS. March 2012. Scan Chapters 4 and 5.

_____. Joint Operational Access Concept (JOAC). Washington, D.C.: CJCS. January 2012. Scan.

G. Supplementary Readings:

Caravaggio, A. "The Attack at Taranto." *Naval War College Review* 59, no. 3 (2006): 103-127.

Douglas, A. H., CAPT, USN. "Employment of Aviation in Naval Warfare." Newport, RI: U. S. Naval War College, 14 December 1939.

Hallion, Richard P. "Air Power and the Changing Nature of Warfare." *Joint Force Quarterly*, (Autumn/Winter 1997-98): 39-46.

Lambeth, Benjamin S. *American Carrier Air Power at the Dawn of a New Century*. Santa Monica: RAND, 2005.

Ramsey, Logan C. "The Influence of Aircraft on the Exercise of Sea Command." *U. S. Naval Institute Proceedings*, October 1938.

Rosendahl, Charles E. "Some Aviation Fundamentals," *United States Naval Institute Proceedings* 51, no. 272 (1925): 1871-1881.

Trimble, William F. *Admiral William A. Moffett Architect of Naval Aviation*. Washington, D.C.: Smithsonian Institution Press, 1994.

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COMBINED ARMS: FUNDAMENTALS OF AMPHIBIOUS WARFARE (Seminar)

*You are Athenians, who know by experience the difficulty of
disembarking in the presence of the enemy.*

—Demosthenes to Athenian troops, 425 BC

A. Focus:

This session examines the theory of amphibious warfare broadly and the ability of maritime nations to project power through the employment of this type of warfare. Amphibious warfare provides an excellent example of naval combined arms and as students will discover, is inherently a joint effort. We will explore the fundamental concepts of amphibious warfare and the options provided by amphibious forces to operational commanders.

B. Objectives

- Comprehend the fundamental concepts of amphibious warfare.
- Comprehend the potential effects that amphibious forces can generate on an enemy.
- Understand the vulnerabilities that amphibious forces, and other elements of the amphibious task force, are exposed to during landing operations.
- Value the unique considerations for employing amphibious forces, in support of operational objectives.

C. Background:

The theoretical underpinnings of amphibious warfare have been established through trial and error over thousands of years. For readers of classic literature, it was the poet Homer who 3,000 years ago wrote in the *Iliad* of the ancient Greeks employing amphibious operations when attacking the city of Troy in Asia Minor, near modern-day Turkey. Greek soldiers crossed the Aegean Sea and stormed ashore on the beaches near Troy during the ten-year struggle to destroy the city. In amphibious operations, therefore, one sees a clear example of a nation exploiting local sea control, for without local sea control and in modern times, local air superiority, amphibious operations are an exceptionally risky course of action to pursue.

The concept is simple, but like many simple military concepts it frequently has proven difficult to realize in practice. At its foundation, command of the sea (sea control) is the critical enabler; it allows the use of the sea as a means of transportation, in this case for military purposes. As stated earlier, certain prerequisites are necessary before even

attempting amphibious operations. A very high level of at least localized sea control and air superiority is a prerequisite for attempting an amphibious operation. The failure of Napoleon's and Hitler's intended invasions of England are examples of the inability of obtaining localized sea control for amphibious operations. Even with control of the sea, however, the difficulties in executing a successful amphibious operation are considerable, and must be weighed against potential results. Geoffrey Till mentions the British siege and capture of Havana in 1762, Wolfe's capture of Louisburg in 1757 and Quebec in 1759 in the Seven Years' War (1757-1764), Wellington's Peninsular Campaign 1807-1814, the operations in the Crimean War of 1854-1856, and MacArthur's amphibious envelopment at Inchon of the North Korean People's Army in 1950 as proof that amphibious operations can have a significant—even decisive—impact on the success of land campaigns.

Amphibious operations generally consist of the assault, withdrawal, raid, demonstration, and other type operations (humanitarian assistance and noncombatant evacuation operations, for example). Regardless of the type of operations, the theory holds true; establish local sea control and air superiority, designate a landing beach or beaches, develop a ship-to-shore movement plan, develop an amphibious fires plan, develop an afloat sustainment plan, and execute. Once the landing force is on shore, and command and control has been phased ashore to the Landing Force Commander, the amphibious operation is terminated and a land operation or campaign begins.

Sea control enables the use of the sea as a conduit for amphibious operations and the sea is, therefore, generally viewed by amphibious forces (the so-called Gator Navy and Marines) as maneuver space. Amphibious operations are extremely complex requiring detailed planning and combined arms cooperation to ensure success. Based on the circumstances, the risks to the amphibious forces can be high, but the potential reward for successful amphibious operations, as history demonstrates, can be immense and alter the course of the conflict. Students should depart the seminar with a firm grasp of the inherent value of amphibious warfare and the utility that amphibious forces provide an operational commander.

The point of contact for this session is Professor Bill Hartig, C-428.

D. Discussion Topics:

What types of operational effects can be generated by amphibious forces?

Command and control challenges are exceptionally complex in amphibious operations. Why is this so? Can anything be done to simplify C2?

What are the differences between conducting amphibious landings on the beaches fronting the open ocean or a peripheral sea and enclosed or semi-enclosed sea?

E. Products:

None.

F. Required Readings:

An Amphibious Warfare Compendium. Excerpted from: Hough, Frank, Verle Ludwig, and Henry Shaw Jr. "Origins of a Mission and the Evolution of Modern Amphibious Warfare." *History of U. S. Marine Corps Operations in WWII Pearl Harbor to Guadalcanal*. Vol. One. Washington, D.C.: Government Printing Office, 1957. **(NWC 1099)**.

Till, Geoffrey. *Seapower: A Guide for the Twenty-First Century*. 3d ed. London: Routledge, 2013. Read pp. 186-201, 252-280. **(Issued)**.

United States Naval War College, Joint Military Operations Department. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. **(NWC 2164)**.

Vego, Milan. *Operational Warfare at Sea, Theory and Practice*. London & New York: Routledge, 2009. Read pp. 57-60. **(Issued)**.

G. Supplementary Readings:

Gatchel, Theodore L. *At the Water's Edge: Defending Against the Modern Amphibious Assault*. Annapolis, MD: Naval Institute Press, 1996.

Heinl, Robert D. "The Inchon Landing: A Case Study in Amphibious Planning." *Naval War College Review* (March 2006): 117-135.

Kennedy, Michael R. "Expeditionary Strike Group Concepts and Recommendations." *Marine Corps Gazette* (March 2006): 16-25.

Mahan, Alfred Thayer. *The Influence of Sea Power Upon History, 1660-1783*. New York: Dover, 1987, reprint of 1890 edition.

United States Marine Corps. *Marine Corps Operating Concepts Assuring Littoral Access. . . . Winning Small Wars* (MOC), Quantico VA: Government Printing Office, Third Edition, June 2010, Chapter 2, "Mission Command," Chapter 6, "Power Projection."

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COMBINED ARMS: FUNDAMENTALS OF MINE WARFARE (Seminar)

We have lost control of the seas to a nation without a Navy, using pre-World War I weapons, laid by vessels that were utilized at the time of the birth of Christ.

—Rear Admiral Allan Smith, USN,
Advance Force Commander, Wonsan, Korea 1950

A. Focus:

This session will address offensive and defensive Mine Warfare (MIW) which consists of offensive and defensive mine laying and Mine Countermeasures (MCM). It will discuss how the offensive and defensive employment of mines can assist naval forces in acquiring sea control or in executing sea denial. Additionally it will examine the complexity faced by a naval component commander when having to deal with mined waters in an operating area, and the methods to clear mined waters (MCM). Finally it also introduces the People's Liberation Army Navy (PLAN) concept of mine warfare and several possible future scenarios for student consideration regarding the impact of sea mining.

B. Objectives:

- Understand how sea mines influence both sea control and sea denial.
- Understand the types of sea mines and their operational impacts.
- Comprehend the current and future offensive and defensive components of MIW.
- Understand the conditions required to conduct MCM operations.
- Comprehend the contributions of combined and joint operations in MCM planning and operations.
- Understand the legal constraints and restraints in regards to MIW.

C. Background:

Mine warfare (MIW) is an important tool for the operational commander. The physical and psychological impact that mines can have on naval operations and maritime trade should not be underestimated. Properly deployed and maintained mine fields can contribute to establishing and maintaining sea control, denying the enemy access to the littorals and open seas, and protecting critical lines of operation and communication.

Employing mines, however, is a double edged sword for the naval component commander, and can deny the use of waterways by the force employing them. In a rapidly changing scenario, the employment of mines may not be the most effective means in

controlling or denying access to the sea. For the naval component commander, mined waters present time/space/force challenges for acquiring freedom of action on the seas. The threat of mines may require adjustments in plans and timelines, or require the execution of branch plans. Mine countermeasures (MCM) operations remain a tedious and time consuming evolution. Consideration of the operational functions, especially intelligence, protection, and movement and maneuver are essential in executing MCM operations. As MCM assets are primarily slow moving surface ships, MCM operations may require establishing local air superiority and sea control as prerequisites for success. Setting these conditions will undoubtedly require a joint/combined effort of naval, air, and ground forces.

The point of contact for this session is Commander Keith Dowling, USN, C-413.

D. Discussion Topics:

Explain the main advantages and disadvantages of the offensive and defensive use of sea mines.

How does the physical environment effect the employment of mines and the conduct of mine countermeasures?

Explain the role and importance of mine warfare in obtaining and maintaining sea control or establishing sea denial in the air, surface, and subsurface environment.

What are the unique implications in space, time, and force that must be considered when conducting mine warfare?

Discuss the main methods of passive and active MCM.

E. Products:

None.

F. Required Reading:

Dowling, Keith. U. S. Naval War College. Joint Military Operations Department. "The Future of Mine Warfare." Newport, RI: Naval War College, 2015. (NWC 5061).

United States Naval War College, Joint Military Operations Department. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. (NWC 2164).

Vego, Milan. U. S. Naval War College. Joint Military Operations Department. "Fundamentals of Mine Warfare." Newport, RI: Naval War College, 2012. (NWC 1009A).

G. Supplementary Readings:

- Bernitt, Thomas R. and Sam J. Tangredi. "Mine Warfare and Globalization: Low-Tech Warfare in a High-Tech World." In Tangredi, ed. *Globalization and Maritime Power*. Washington, D.C.: National Defense University, 2002.
- Chilstrom, John S. "Mines Away! The Significance of U. S. Army Air Forces Minelaying in World War II." Research paper, Maxwell AFB, AL: Air University, May 1992.
- Goulda, Michael E. "The Dardanelles Campaign: A Historical Analogy for Littoral Mine Warfare." *Naval War College Review* 51, no. 3 (Summer 1998): 82-96.
- Luckow, Ulrich. "Victory over Ignorance and Fear: The U. S. Mine Laying Attack on North Vietnam" *Naval War College Review* 35 (Jan-Feb 1982).
- Till, Geoffrey. *Seapower: A Guide for the Twenty-First Century*. 3d ed. London: Frank Cass, 2013.

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MARITIME TRADE WARFARE (Seminar)

In the military, over 90 percent of our DOD requirements travel by the sea. It's quite important to us. We are a nation that relies on the maritime industry as a critical component of our country's economy as well as our national security...It is American ships and American seafarers who have always come through for us in times of peace, war or national emergency

Vice Admiral William Brown,
Deputy Commander, USTRANSCOM, 2014

A. Focus:

This session will focus on the objectives, methods, and tenets employed in attacking the enemy's maritime trade and defense and protection of friendly maritime trade ("maritime trade warfare") at the operational and theater-strategic levels of war. Both the theory and practice of maritime trade warfare will be examined, with particular attention given to its conduct in the littorals, its direct, indirect, and secondary effects, and considerations for the Combatant Commander with respect to commerce warfare in a modern threat environment. The roles of submarine, mine, and air warfare in attacking and defending trade, and the importance of intermodal transport to sustaining wartime economies will also be explored.

B. Objectives:

- Understand the importance of the theory and practice of maritime trade warfare at the operational level of war.
- Comprehend the objectives, main methods, and tenets of attacking the enemy's maritime trade and defense and protection of friendly maritime trade.
- Understand the elements of maritime trade and the direct and indirect effects of maritime trade warfare on an enemy's ability to project combat power and sustain its war-fighting capacity.
- Comprehend that maritime trade warfare is inherently a joint, interagency action.

C. Background:

In the era prior to the advent of aircraft, a principal task of any navy was to attack enemy shipping at sea while, at the same time, defending and protecting friendly shipping. This situation changed drastically in World War II and afterward, when land and carrier-based aircraft were used to attack not only shipping but also other elements of maritime trade: ships in port and port facilities, shipyards/ship repair facilities, storage areas, and intermodal rail, road, and waterborne transport systems. Yet these considerable changes were

often not recognized by naval theoreticians and practitioners. The importance of commercial shipping is reflected in the use of terms such as “anti-SLOC,” “pro-SLOC,” and “naval control of shipping.” The arbitrarily selected term here, “maritime trade warfare,” is more accurate because it encompasses both attack and defense/protection of maritime trade, not just of merchant shipping.

Today, there are some maritime and naval experts who apparently believe that in the era of globalization, there will be no attacks on the enemy’s maritime trade. According to this reasoning, no belligerent would take such an action due to business related interdependency, and/or because his own trade would suffer considerable losses. However, experience shows that, in any significant war, all belligerents will engage in a struggle to destroy/neutralize and defend/protect merchant shipping or maritime trade *to the greatest degree possible*. Hence, in any future high-intensity conventional war at sea, both the stronger and the weaker side can be expected to conduct extensive maritime trade warfare. The focus of a weaker side, at sea, is often on attacking the enemy’s maritime trade, while the stronger side will focus on defense and protection of friendly maritime trade.

The size of the sea area – short distances versus long – and the peculiar features of the physical environment, often necessitate considerable differences between maritime trade warfare conducted on the open ocean versus in enclosed or semi-enclosed seas (popularly called “narrow seas”). In the broader context, one’s attack on enemy maritime trade is conducted in support of a strategic objective to weaken the enemy’s military-economic potential; a classic attack on a nation’s economy. Operationally, the objective is to destroy or neutralize the flow of maritime trade in a given part of a maritime theater. This is accomplished by the employment of one’s naval forces and those of other services to interfere, interdict, curtail, or cut-off the enemy’s maritime trade. The main methods of employment of one’s combat forces consist of a series of major and minor tactical actions conducted over a relatively long period of time. From time to time, major naval/joint operations are conducted as well.

Defense of maritime trade is one of the most important responsibilities of a government and its armed forces. It pertains to both defensive and offensive employment of one’s combat forces, while “protection” refers to organizational, technical, and other measures aimed at ensuring the safety of one’s maritime trade without the use of weapons. If one’s forces are relatively limited, focus should be on the selected elements of one’s maritime trade in conducting defense and protection. A country that fails to safeguard its seaborne trade may find that it not only suffers significant economic harm but also that its entire war effort has been crippled. Consequently, defense and protection of maritime trade is among a navy’s principal operational tasks in a high-intensity conventional war.

The point of contact for this session is Professor Christopher McMahon (RADM, USMS), C-411.

D. Discussion Topics:

What are some of the lessons learned in World War II with regard to maritime trade warfare?

Describe the elements of maritime trade. How might the differences between maritime trade conducted on the open ocean and in enclosed/semi-enclosed seas affect the commander's operational planning?

Discuss the main methods of combat employment of naval forces and aviation in attacking an enemy's maritime trade, including the conduct of submarine, surface, and mine warfare.

What are the principal methods traditionally employed in the defense and protection of friendly maritime trade? How should a Joint Force Commander plan to protect maritime trade, both military and/or commercial, in a modern threat environment?

Describe some key prerequisites for success in attacking an enemy's maritime trade and for defending/protecting one's own.

Is unrestricted commerce warfare, such as occurred in WWII, possible in the 21st Century?

What are some of the legal, environmental, and economic issues in attacking commercial vessels?

Is commerce warfare possible through the employment of business practices such as marine insurance?

E. Products:

None.

F. Required Readings:

Corbett, Julian S. *Some Principles of Maritime Strategy*. Project Gutenberg E-book. Scan all then read the summary of pp. 269-270. (NWC 4011).

Poirer, Michael T. "Results of the German and American Submarine Campaigns of World War II." U. S. Navy, Office of the Chief of Naval Operations, Submarine Warfare Division, 1999. (All less the Appendix). (NWC 3175).

Till, Geoffrey. "A Changing Focus for the Protection of Shipping" in *The Strategic Importance of Seaborne Trade and Shipping: A Common Interest of Asia Pacific*, ed. Forbes, Andrew. Canberra, Australia: Sea Power Centre–Australia, 2002. (NWC 4032).

Vego, Milan. *Maritime Trade Warfare*. Newport, RI: Naval War College, August 2015. Scan all, then read pp. 1-21, 32-34, and 48-50. (NWC 1135).

G. Supplementary Readings:

Aldershot, U.K.: Ashgate, The Navy Records Society, 1997. James, Jonathan T. "Countering Naval Guerrilla Warfare: Are Convoys Obsolete?" Fort Leavenworth, KS.: School of Advanced Military Studies, U. S. Command and General Staff College, 1991.

Goulter, Christina, J. M. *A Forgotten Offensive: Royal Air Force Coastal Command's Anti-shipping Campaign, 1940–1945*. London: Frank Cass, 1995.

Grove, Eric, J. *The Defeat of the Enemy Attack on Shipping 1939–1945*. A revised edition of the Naval Staff History Volumes 1A (Text and Appendices) and 1B (Plans and Tables).

Kemp, Paul. *The Russian Convoys, 1941–1945*. Poole, Dorset, U.K.: Arms and Armour Press, 1987.

Lewis, Archibald. R. *The Northern Seas: Shipping and Commerce in Northern Europe A.D. 300–1100*. Princeton, N.J.: Princeton University Press, 1958.

Navias, Martin S., and E. R. Hooton. *Tanker Wars: The Assault on Merchant Shipping during the Iran-Iraq Conflict, 1980–1988*. London: I. B. Tauris Publishers, 1996.

Schoefield, B. B. *The Russian Convoys*. Philadelphia, PA: Dufour Editions, 1964.

Tracy, Nicholas. *Attack on Maritime Trade*. Toronto: University of Toronto Press, 1991.

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Woodman, Richard. *Malta Convoys 1940–1943*. London: J. Murray, 2000.

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DESIGNING MAJOR NAVAL/ JOINT OPERATIONS (Seminar)

Is the proposed operation likely to succeed? What might be the consequences of failure? Is it in the realm of practicability in terms of materials and supplies?

—Posted on the bulkhead in
Fleet Admiral Chester Nimitz' office

A. Focus:

Using our understanding of naval capabilities and war fighting theory, in this session students will examine how the previously discussed general concept of an operational design for a major operation specifically applies to the design of major naval operations. This session sets the conditions for our tactical analysis of five major surface battles in the waters around Guadalcanal during the opening stages of World War II.

B. Objectives:

- Comprehend how the key elements of operational design apply to the design of major naval operations.
- Using the Guadalcanal case study, analyze and critique the Japanese and U. S. commander's operational designs.

C. Background:

Previous sessions have explored how major operations or campaigns contain a number of elements that collectively ensure the accomplishment of the selected or assigned military objective(s). For this to happen, an overall operational design or operational idea should exist to ensure that one's forces are employed in a coherent manner and focused on the assigned operational or strategic objectives in the theater. This session allows the student to consider how the previously discussed concept of the operational idea applies to the design of a major naval operation.

In generic terms, a major naval operation consists of a series of related major and minor naval tactical actions conducted by diverse naval forces and combat arms of other services, in terms of time and place, to accomplish an operational (and sometimes strategic) objective in a given maritime theater of operations. Major naval operations are planned and conducted in accordance with an operational idea (scheme) and common plan. They are normally an integral part of a maritime or land campaign, but they can sometimes be conducted outside of the framework of a campaign.

An analysis and critique of the Japanese and U. S. operational design and its underlying operational idea (scheme) for (the Guadalcanal case study) will be conducted to highlight those aspects of the operational art unique to operational warfare in a maritime context. In the near future, we will complete Tabletop Exercise (#3, The PRC-Taiwan Case Study), in which students will be tasked with coming up with the rudimentary elements of an operational design against a near-peer competitor.

The point of contact for this session is Professor Ivan Luke, C-431.

D. Discussion Topics:

Describe the general components of an operational design for a major naval operation.

Does the operational design for major naval operations differ from design of major operations in the land domain? If so, how?

Guadalcanal Case Study:

What were the planned Japanese and U. S. objectives for the Guadalcanal case study? To what degree were they nested? Were they appropriate?

Deduce and restate the Japanese and U. S. operational ideas (scheme) for the Guadalcanal case study. What, with the advantage of hindsight, might they have done differently to better achieve their ultimate objective?

Analyze and critique the Japanese and U. S. balance of operational factors and functions.

What elements of the Japanese and U. S. operational design contributed significantly to the outcome?

E. Products:

None.

F. Required Reading:

Hornfischer, James D. *Neptune's Inferno The U. S. Navy at Guadalcanal*. New York; Bantam 2012. Read: Chapters 4, 5, 6, 7. **(Issued)**.

Stille, Mark. *The Naval Battles for Guadalcanal 1942*. Oxford; Osprey Publishing 2013. Read pp. 5-93. **(Issued)**.

Vego, Milan. *Operational Warfare at Sea*. London and New York: Routledge, 2009. Review pp. 119-171. **(Issued)**.

G. Supplementary Readings:

Mahan, Alfred Thayer. *Naval Strategy Compared and Contrasted with the Principles and Practice of Military Operations on Land*. Lecture series, Naval War College. S. Lowe Marston and Co.: Boston, MA, 1911.

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TABLETOP EXERCISE #2: ANALYSIS OF THE STRUGGLE FOR GUADALCANAL

My God, what are we going to do about this?

Vice Admiral Robert L Ghormley
Nouméa, September 1942

A. Focus:

This tabletop exercise, a natural segue from the prior analysis of the operational design, is designed to assist students in comprehending, through the naval battles for Guadalcanal, how both the U. S. and Japanese commanders attempted to leverage combined arms in the struggle for sea control. The exercise uses three of the five night surface naval battles around Guadalcanal: Savo Island, The Battle of Cape Esperance, the First Naval Battle of Guadalcanal, the Second Naval Battle of Guadalcanal, and the Battle of Tassafaronga. The battles' operating conditions, exportable to the modern operating environment, should serve as an intellectual line of departure in developing an operational idea in the next tabletop exercise.

B. Objectives:

- Understand the organization of naval forces based on threat and objective.
- Reinforce an understanding of naval capabilities in a combined arms arena.

C. Background:

During the beginning of the Second World War in the Pacific, most battles were fought according to the manner the Japanese desired. They held the initiative and had the advantage of better trained, organized and focused forces. The Allies had to react to the Japanese attacks and were typically outfought and defeated as the Japanese seized outposts across Southeast Asia and the Central Pacific. Japanese defeats at the Battles of Coral Sea and Midway affected their ability to maintain the initiative in the war. With the loss of five Imperial Japanese Navy aircraft carriers in these battles, they no longer held the force advantage to assure victory in any operation. The latter stage of the Pacific War, from the Battle of Tarawa in November 1943 to the end of the war saw both the strength and quality of U. S. naval forces expand to such a level that the Japanese Navy was unable to compete. While Japanese ground forces could inflict significant casualties on American ground forces attacking their defenses on a coral atoll, at sea and in the air, U. S. forces dominated the conflict. The U. S. war economy out produced the Japanese to the extent that the Japanese could not keep up regardless of their fearless devotion to the Emperor's cause. During this

segment of the war the U. S. Navy could fight the way of war it desired, using the industrial output of the American factories to destroy the Japanese on, over, and below the sea.

It is only in the 'middle' portion of the war, from after Midway to roughly the beginning of 1944, where neither side was fighting the type of war they envisioned. This required both sides had to make do as best they could. The U. S. Navy at Guadalcanal, the first U. S. offensive operation of the war, was past the nadir of its wartime performance, but not by much. The Japanese, still shrugging off the shock of the Midway defeat, were not far from their zenith. The Imperial Japanese Navy was a combat force with experienced tactical commanders, well trained crews and, in several areas, better armed ships than their U. S. opponent in 1942. Over the course of the six month battle, both sides' fortunes ebbed and flowed and the side that made the best use of the resources at hand took the lead.

The naval battles of Guadalcanal resulted in alarming losses to the U. S. Navy surface fleet. Many of the naval battles during the six month struggle for the island were fought not at the weapons optimum ranges envisioned by either side, but in close quarters in highly restricted seas. The casualties suffered by the U. S. Navy included 4,900 killed and nearly 3,000 wounded. In fact, the number of U. S. sailors killed in the battles off Guadalcanal exceeded the number of Marines and Soldiers killed in ground fighting (1,769 killed). Losses to the Japanese at sea were also significant. In many ways this is the story of the prewar navies fighting it out for sea control in the Solomon Islands. This might also suggest that a peacetime navy requires a long time to develop the tactics, techniques and mindset to excel at warfare, a time that future navies and their sailors may not have.

The purpose of this second table top exercise is to critically analyze the naval battles through the lens of operational art and naval warfare theory. To avoid making this exercise one of hindsight, students should avoid focusing on what happened and instead analyze the leadership decisions within an operational art framework to answer why those decisions were made. This exercise will include moderator led discussion and student group work. Seminar teams will analyze each of the naval battles providing commentary on U. S. and Japanese leadership decisions using an operational art framework.

The point of contact for this session is Professor S. L. Forand, C-407.

D. Discussion Topics:

From the Japanese Commanders' viewpoint, what were his challenges with respect to Time, Space, and Force? From the U. S. Commanders' viewpoint?

How well did both commanders offset deficiencies in factors with their available operational functions?

Were there any opportunities for either side to better utilize combined arms during the struggle for Guadalcanal?

It has been said that the U. S. Navy was a learning organization during the early years of World War II. What adjustments did the U. S. Navy make after each battle? Were they successful in their implementation?

What did the Imperial Japanese Navy learn from their experiences in fighting the U. S. fleet in the waters off Guadalcanal? How did this influence their decision to evacuate Guadalcanal?

E. Products:

Student teams will prepare and brief an assigned battle, answering assigned questions.

F. Required Readings:

Hornfischer, James D. *Neptune's Inferno The U. S. Navy at Guadalcanal*. New York; Bantam 2012. Review: Chapters 4, 5, 6, 7. **(Issued)**.

Stille, Mark. *The Naval Battles for Guadalcanal 1942*. Oxford; Osprey Publishing 2013
Review: pp. 5-93. **(Issued)**.

President, United States Naval War College to Commander in Chief, U. S. Fleet. "Comments on the Battle of Guadalcanal, Nov. 11-15, 1942." Newport, RI: Naval War College, 5 June 1943. **(NWC 1167)**.

G. Supplementary Readings:

Cook, Charles. *The Battle of Cape Esperance*, Annapolis, MD: Naval Institute Press 1992.

Crenshaw, Russell Sydnor. *South Pacific Destroyer: The Battle for the Solomons from Savo Island to Vella Gulf*. Annapolis, MD: Naval Institute Press, 1998.

_____. *The Battle of Tassafaronga*, Baltimore, MD: Nautical and Aviation Publishing Company of America, 1995.

Fuller, Richard. *Japanese Admirals 1926-1945*. Schiffer, Atglen 2011.

Grace, James W. *The Naval Battle of Guadalcanal*, Naval Institute Press, Annapolis 1999.

Hara, Tameichi. *Japanese Destroyer Captain*. New York: Ballantine Books, 1961.

Loxton, Bruce and Coulthard-Clark, *The Shame of Savo*, Naval Institute Press 1994

Newcomb, Richard F. *The Battle of Savo Island*, Holt, Rinehart and Winston, New York 1981.

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THE FALKLANDS / MALVINAS CONFLICT (Lecture and Exercise)

A senior officer said after the war that it had proved that 'the things we did on the basis of well-trying and proven formations worked, and the ad-hoc arrangements turned out much less happily.' Joint-service liaison and staff work left much to be desired.

—Hastings and Jenkins, *The Battle for the Falklands*

A. Focus:

This session serves as the synthesis event for the components of operational art and maritime warfare theory discussed in preceding sessions and serves as a collective preparation for the upcoming examination. The emphasis is placed on the decisions and actions of operational-level commanders on both sides of the conflict and how they could have been different with a better understanding of operational art.

B. Objectives:

- Synthesize and apply the components of operational art and maritime warfare theory studied to date.
- Analyze and evaluate how commanders and their staffs applied operational art in a historical case study.
- Apply concepts from international and maritime operational law in order to evaluate the legal issues in a historical case study.
- Analyze the operational lessons valid for the employment of modern, multinational and joint forces.

C. Background:

This case study is conducted over four sessions, starting with a presentation of the historical/strategic background to the conflict by the JMO Royal Navy exchange officer. A 60-minute film drawing out key elements should be viewed via BlackBoard prior to the commencement of this session. Students will have seminar time available to study the case materials and develop student-led discussions of the assigned questions. The final session is devoted to student-led discussions of the case study.

This session is designed to reinforce the aspects of operational art and maritime warfare theory studied and discussed in preceding sessions. Historical examples provide an excellent opportunity for illustrating the complexities of planning, preparing, conducting, and sustaining major operations and the reasons why particular military actions either succeeded

or failed. This particular case is used because it is rich with examples of the application, lack of application, misapplication, or inability to apply the concepts associated with operational art.

The goal of this session is to provide in-depth discussion and analysis of major aspects of the 1982 Falklands/Malvinas Conflict from an operational perspective. As the major synthesis event for this portion of the syllabus, the motivations, planning, and actions of both sides in the conflict will be examined in some detail. Seminar moderators will assign specific responsibilities for student discussion of the case.

The point of contact for this session is Commander Darren Houston, Royal Navy, C-407.

D. Discussion Topics:

Applying the principles elements of operational design, analyze the Falklands/Malvinas conflict. How did each side use the concepts of operational design in developing its plan?

To what extent were the objectives for each side appropriate? Why?

How well did each side employ forces relative to theater geometry to achieve its objectives?

Critique the British and Argentinian operational theater organization and the relevant command structures. What would you have done differently?

How well did each side apply the aspects of operational and maritime law?

What major operational lessons learned can the United States derive from this conflict?

E. Products:

To synthesize operational art concepts, students will use an analytical framework in order to discuss and answer moderator assigned questions.

F. Required Readings:

Hime, Douglas N. U. S. Naval War College. Joint Military Operations Department. "The 1982 Falklands-Malvinas Case Study." Newport, RI: Naval War College, 2010. **(NWC 1036).**

Vego, Milan. *Joint Operational Warfare: Theory and Practice*. 2006. Reprint, Newport, RI: Naval War College Press, 2009. **(Issued).** Read: APP 91-93 and 97-101.

G. Supplementary Readings:

Selected extracts from *Conflicto Malvinas, Official Report of the Argentine Army*, Vol. II. Clapp, Michael. *Amphibious Assault Falkland Islands: The Battle of San Carlos Water*. Annapolis, MD: Naval Institute Press, 1996.

Freedman, Lawrence. *The Official History of the Falklands Campaign—Vol 2*. London: Routledge, Taylor & Francis Group, 2005.

Freedman, Lawrence, and Virginia Gamba-Stonehouse. *Signals of War: The Falklands Conflict of 1982*. Princeton, NJ: Princeton University Press, 1991.

Hastings, Max, and Simon Jenkins. *The Battle for the Falklands*. New York: Norton, 1983.

Middlebrook, Martin. *Task Force: The Falklands War, 1982*. Rev. ed. London: Penguin, 1987.

Scheina, Robert L. “The Malvinas Crisis, March–April 1982” and “The Malvinas War, May–June 1982.” Chapters 14 and 15 in *Latin America: A Naval History 1810–1987*. Annapolis, MD: Naval Institute Press, 1987.

Summers, Harry G., Jr. “Strategic Lessons Learned: The Falkland Islands Campaign.” *The Art of War Quarterly*, (Sept. 1983): 91-112.

Thompson, Julian. “Amphibious Logistics—Falklands 1982.” Extract from Chapter 8 in *The Lifeblood of War: Logistics in Armed Conflicts*. London: Brasseys, 1994.

_____. *No Picnic: 3 Commando Brigade in the South Atlantic: 1982*. New York: Hippocrene, 1985.

Woodward, Sandy. *One Hundred Days—The Memoirs of the Falklands Battle Group Commander*. Annapolis, MD: Naval Institute Press, 1992.

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EXAMINATION ONE (Individual Effort)

*No wonder then, that war, though it may appear to be uncomplicated,
cannot be waged with distinction except by men of outstanding intellect.*

—Carl von Clausewitz,
On War, 1832

A. Focus:

This session is intended to permit the Raymond A. Spruance student to demonstrate a synthesis of the material presented to date and to demonstrate higher order thinking skills.

B. Objectives:

- Synthesize operational art and maritime warfare theory concepts through the analysis of a historical, real-world case study.
- Create a coherent response to the examination questions that demonstrate an internalization of various concepts of operational art.

C. Background:

Written examinations serve three fundamental purposes: to evaluate student understanding of a given subject, to evaluate the student's ability to think critically and respond to a complex question, and last, to evaluate the faculty's ability to convey information and to create new knowledge. This session presents the student with the opportunity to demonstrate mastery of the first two purposes stated above and further allows the moderators to ensure that no intellectual gaps exist in student learning to this point.

Students will be provided with a case study that contains sufficient information to address the questions presented. This case study will be issued in sufficient time to allow students to prepare as individuals and as a group. Time is dedicated on 28 March 2016 (0830-1145) for student preparation as a group. (Students are strongly encouraged to prepare as a seminar.) The examination will be issued at 1200 on 28 March 2016 and is due to the moderators not later than 1200 on 29 March 2016. Grading criteria for the operational art examination may be found in the front matter of this Syllabus.

The point of contact for this session is Professor Doug Hime, C-423.

D. Discussion Topics:

See examination question sheet.

E. Products:

A written response to assigned questions that demonstrates student mastery of the various concepts studied thus far. This effort should not exceed 10 double spaced typed pages in Times New Roman font 12 point with one inch margins top, bottom, and right, and one and a quarter inches left. (Use the mirrored option under page layout in Microsoft Word.)

F. Required Reading:

A case study will be issued prior to the examination with sufficient time for students to conduct a thorough analysis and prepare for the examination.

G. Supplementary Readings:

None.

MARITIME OPERATIONAL LAW (Lecture)

The sea, in contrast to [land] cannot be held or captured. . . No one possesses the sea or an ocean permanently.

—*The Nature of Naval Warfare*,
Naval War College Staff, 1938

A. Focus:

This lecture focuses on the law of the sea and the law affecting military operations in the maritime environment. When planning and conducting military operations, commanders and their subordinates must comply with the international law that governs (1) the legal basis for nations to use force and lethality and (2) the law that governs the conduct of hostilities extraterritorially. We now add an aquatic tributary flowing from these two streams into the maritime environment (conflict and non-conflict). The general features of the maritime environment, what is called *The Maritime Domain* will be discussed from a legal perspective. Legal classifications or regimes of the ocean and airspace directly affect maritime operations by determining the degree of control a coastal nation may exercise over the conduct and activities of foreign merchant ships, warships, and aircraft operating in those areas. This lecture discusses not only constraints maritime operational law might have on military operations but, also how the operational commander can use the law, what some now call *lawfare*, to achieve success in both conflict and non-conflict missions.

B. Objectives:

- Value the maritime operational considerations resulting from the sovereign right of nations to limit the entry and movement of foreign forces within their territorial seas.
- Analyze the operational challenges in asserting freedom of navigation and protection of commerce on the maritime commons.
- Analyze emerging legal issues surrounding freedom of navigation in disputed maritime areas such as the Arctic, the Arabian Gulf, and the South China Sea.

C. Background:

For the operational planner, “Factor Space” is heavily influenced by international law governing establishment of land, sea, and air “boundaries.” These boundaries directly impact a military forces’ freedom of movement. For example, during the deterrent or pre-hostilities phase of an operation, military forces typically respect the sovereign rights of nations regarding their land territory, national waters, and national airspace.

During the hostilities phase of an operation, when the Law of Armed Conflict governs the situation, the movement of military forces may be conducted without regard to the sovereign territorial rights of the enemy belligerent nation. However, the traditional sovereign rights of other states (e.g., neighboring/neutral states) must, as a matter of law, continue to be respected. Limitations on freedom of movement of forces within land, sea, and air boundaries of such neighboring/neutral states must be factored into operational planning. For instance, when navigation and over flight rights within another nations' air and sea space prove insufficient, operational planners must consider alternative routes or consider notifying the State Department of the need to obtain access and transit agreements in order to facilitate planned operations.

Freedom of movement in international waters and airspace is fundamental to implementing U. S. national and military strategies. The legal basis for these navigational freedoms is the United Nations Convention on the Law of the Sea (UNCLOS). This freedom allows access to strategic areas of the world, facilitates support and reinforcement of forward-deployed forces, enables U. S. and coalition forces to operate worldwide, and ensures uninterrupted global commerce. During this lecture and associated readings the rights of all nations in international waters and international airspace, as well as the limited rights of coastal nations to exercise jurisdiction over some portions of the sea and airspace adjacent to their coastline will be discussed.

Although UNCLOS has not been ratified by the U. S. Senate, all U. S. military operations are, by Executive Order (EO), conducted in accordance with UNCLOS' delineation of rights and responsibilities. The EO, in place since 1983, is recognized as depicting customary international law and reflects UNCLOS' descriptions of various maritime zones and boundaries and such areas associated states' rights and responsibilities. Since the EO's enactment, the United States has actively exercised and asserted U. S. navigation and over flight rights and freedoms on a worldwide basis. The U. S. does so in a manner consistent with the balance of sovereignty and interests reflected in UNCLOS through the Freedom of Navigation Program (FONOPS). Moreover, pursuant to the EO, the United States under President Ronald Reagan (*Statement on United States Ocean Policy*, 10 March 1983) asserted it will not "acquiesce in unilateral acts of other states designed to restrict the lawful rights and freedoms of the international community in navigation, over flight, and other related high seas uses.

The point of contact for this session is Captain Robert A. Sanders, LP.D, JAGC, USN, C-424.

D. Discussion Topics:

What sovereign rights does a nation have regarding its land territory, territorial sea and national airspace, and how does this affect the movement or operation of foreign military forces in these zones?

What are the distinctions between innocent passage, transit passage, archipelagic sea-lane passage, and high seas freedoms of navigation? How, if at all, are military planning and operations affected by the various legal regimes of oceans and airspace?

How can operational planners use the concepts of belligerent control of the immediate area of operations, maritime / air warning zones, and blockade to assist mission accomplishment?

To what extent may the military operations of a belligerent nation be conducted within the land territory, national airspace and national waters of a neutral or non-belligerent nations?

E. Products:

None.

F. Required Reading:

Guangqian, Major General (Ret) Peng, People's Liberation Army, "China's Maritime Rights and Interests," in *Military Activities in the EEZ, A U. S.-China Dialogue on Security and International Law in the Maritime Commons*, Vol. 7 Naval War College, China Maritime Studies Institute (December 2010), 15-22. **(NWC 1150)**.

Pedrozo, Raul "Pete," "The Bull in the China Shop and Rising Tensions in the Asia Pacific Region. *Naval War College, International Law Studies*, 90 66. (2014). **(NWC 1205)**.

U. S. Department of Defense, General Counsel. *DoD Law of Warfare Manual*, 2015. Scan Chapter XIII, Naval Warfare. **(NWC 1208)**.

U. S. Department of the Navy. Naval Warfare Publication 1-14M, *The Commander's Handbook on the Law of Naval Operations*. July, 2007. Scan Chapters 1-5. **(Issued)**.

G. Supplementary Reading:

Garamone, George. "[CJCS General] Dempsey Urges Ratification of Law of the Sea Convention." Armed Forces Press Service. May 9, 2012.
Available at: <http://www.defense.gov/news/newsarticle.aspx?id=116265>.

Kraska, James and Brian Wilson, "Combating Pirates of the Gulf of Aden: The Djibouti Code and the Somali Coast Guard," *Ocean & Coastal Management* (2009).

Migdalovitz, Carol, "Israel's Blockade of Gaza, the *Mavi Marmara* Incident, and Its Aftermath," Congressional Research Service, (June 23, 2010).

United Nations. *United Nations Convention on the Law of the Sea*. Third United Nations Conference on the Law of the Sea. 1983. Articles 1-25, 29-54, 86-111 and 121.

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OPERATIONAL LAW—USE OF FORCE (Lecture)

Nothing in the present Chapter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a member of the UN until the Security Council has taken measures necessary to maintain international peace and security.

—UN Charter, Article 51

A. Focus:

This lecture continues the operational law portion of the Spruance Course curriculum. Operational law is a broad term encompassing those facets of international law, U. S. domestic law, U. S. military regulations and the domestic law of other nations impacting military planning and operations. When planning and conducting military operations, commanders and their subordinates must comply with the international law that governs (1) the location of hostilities/extraterritoriality, (2) the legal basis for nations to use force and (3) levels of lethality. This lecture is discussing both the *jus ad bellum* (a nations' right to use force—or go to war) and the *jus in bello* (the law of armed conflict during land, air, and naval warfare); however it focuses on the former (the latter receives direct attention in the follow-on Rules of Engagement Seminar). Additionally, this lecture touches on legal issues arising from modern use of force against non-state actors, during detainee operations, in drone/UAV/RPV strikes, and in cyber operations among others. Session objectives are considered in relationship and application to planning and executing U. S. military operations and within the Department of Defense's mandate (DoDD 2311.1E) that all "Members of the DoD Components comply with the law of war during all armed conflicts, however such conflicts are characterized, and in all other military operations, especially those holding the potential for use of force."

B. Objectives:

- Describe the effect of international law on the planning and execution of military operations.
- Summarize the basic principles of the law of armed conflict for land, air, and naval warfare.
- Analyze emerging legal issues surrounding the law of armed conflict at the strategic and operational levels of war.

C. Background:

International relations, both military and civilian, involve the application of international law - senior military officers may encounter international law in both contexts. For example, international law regulates such diverse activities as aviation safety, communications, financial transactions, nautical rules of the road, and environmental protection. Paramount in the military context is that along with *domestic law* derived from a nation's constitution, International law is the standard measurement for the legality of a nation's resort to use of force and application of the law of war under the rule of law during conflict or operations short of war.

There are two primary sources of international law: state practice and international agreements. When state practice attains a degree of regularity and is accompanied by the general conviction among nations that such behavior in conformity with that practice is obligatory; that practice it is said has risen to become a rule of *customary law* or *customary international law*. Customary international law is binding upon all nations and exists without a signed agreement (*e.g., treaties or conventions*).

Bilateral or multilateral formal agreements between and among nations are the primary sources of international law, and many often restate customary international law norms while adding additional material and considerations. Signed, formal agreements, *treaties or conventions* come in multiple forms — related and unrelated to the conduct of hostilities. Significant conventions and treaties related to the conduct of hostilities include, the Hague Conventions of 1907, the Geneva Conventions of 1949; the UN Charter; the 1975 Declaration protecting persons from Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment; the 1977 Additional Protocols (AP I and AP II) to the 1949 Geneva Conventions (I, II, III and IV); and the 1993 Chemical Weapons Convention, and the 1997 Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-personnel Mines (Ottawa Treaty), among others. Secondary sources of international law include general principles of law, judicial decisions, and the writings of legal experts.

The UN Charter is the keystone publication for understanding the post-WWII construct for a nation's resort to use of force whether in accordance with the Charter's Article 51 (self-defense) or as authorized by a formal Resolution of the UN Security Council. Other legal bases for use of force may include, but are not limited to, humanitarian intervention to stop a genocide (R2P- responsibility to protect), protection of own nationals abroad through non-combatant evacuation operations (NEOs) or the rescue of hostages taken by terrorists or pirates.

The two legal regimes that may apply to a use of force are (1) *International Human Rights Law (IHRL)* or (2) the *Law of Armed Conflict (LOAC)*. LOAC (which is the current preferred U. S. terminology) has been historically referred to as the *Law of War*; and today it is often referenced by the international community as *International Humanitarian Law or IHL*. Unlike the general body of IHRL, which the USG generally considers a peacetime regime; IHL/LOAC is the specialized body of law directed at military members involved in international armed conflict (IAC), non-international armed conflict (NIACs), and during all U. S. military-executed counter-terrorism (CT) operations. The U. S. military generally uses the terms IHL and LOAC consistent with guidance under the DoD Law of War (LOW) Instruction and the 2015 DoD Law of War Manual.

Additional and slightly different language on the same subject is found under the International Committee of the Red Cross and Red Crescent Society (ICRC) definition. The DoD instruction on LOW definition says,

Law of War. That part of international law that regulates the conduct of armed hostilities. It is often called the ‘law of armed conflict.’ The law of war encompasses all international law for the conduct of hostilities binding on the United States or its individual citizens, including treaties and international agreements to which the United States is a party, and applicable customary international law.

The ICRC definition states, “International humanitarian law is a set of rules which seek, for humanitarian reasons, to limit the effects of armed conflict ... [it] protects persons who are not or are no longer participating in the hostilities and [it] restricts the means and methods of warfare” unless stated otherwise. This set of laws is represented, among other places, in Common Article 3 of the four 1949 Geneva Conventions.

The U. S. military’s Law of War Doctrine does not consider most human rights law extraterritorial, i.e., these laws are within a legal regime that generally does not apply across nation state borders. The U. S. view on the application of human rights in armed conflict is: in international armed conflict, only the customary law of human rights applies; in NIAC, both customary and treaty law (to which the U. S. is a party) apply, but this application is subject to the doctrine of *lex specialis* (“law governing a specific subject matter”). Under *lex specialis*, when there is a conflict between the two sources of law (IHL/LOAC and IHRL), the LOAC rule (the specialized law) is followed. Likewise, things in the conflict zone, not germane to the fight (the right to marry or to vote, for example) would generally be governed by IHRL.

In contrast, the U. S. does consider LOAC to have extraterritorial application, i.e., it applies globally at all times to military forces during armed conflict and is the law primarily applicable during international military combat operations. Definitely, it is that part of international and domestic law regulating the conduct of armed hostilities under the *jus in bello* construct. LOACs extraterritorial application is based on domestic policy, international custom and practice, and international agreements or conventions and shows up in execution as the *rules of engagement* followed by forces in the field.

There are three general principles of LOAC: *military necessity*, *proportionality*, and *humanity*. *Military necessity* allows a belligerent to apply force to achieve legitimate military objectives. *Proportionality* means the degree of force used must be no greater than necessary (i.e., minimally necessary) and required (i.e., proportional) to the prompt realization of those legitimate military objectives sought to be obtained. *Humanity* forbids the infliction of suffering, injury, or destruction not actually necessary to accomplish legitimate military purposes (i.e., not militarily necessary and/or not proportional). LOAC also requires, for example, that belligerents distinguish as much as reasonably possible between combatants and noncombatants when targeting the enemy; and for combatants to do the same and separate from non-combatants when in a position to be engaged by opposing forces—this is known as the *principle of distinction*.

Finally, LOAC is consistent with Principles of War, such as objective, mass, and economy of force. LOAC and the previously discussed Principles of War stress the importance of directing force against critical military targets, while avoiding the waste of resources against objectives that are militarily unimportant. LOAC also enhances legitimacy and facilitates restraint; both of which are principles of Joint Operations.

The point of contact for this session is Captain Robert A. Sanders, LP.D, JAGC, USN, C-424.

D. Discussion Topics:

Why do nations care about international law when deciding whether or not to use force? What motivates them to comply with its provisions?

Describe the role of the UN Security Council (UNSC) regarding the use of force against a nation or non-state actors.

What are the requirements to be a lawful combatant; to be a non-combatant/civilian? What is an unlawful (or unprivileged) combatant?

To what extent does the law of armed conflict apply across the spectrum of conflict? Across this spectrum of conflict are criminals, unlawful combatants, or violent extremist organizations (VEOs) subject to the same or different treatment?

How has the law of armed conflict changed, if at all, during the conflicts in Iraq and Afghanistan? Is it different for combating ISIL?

E. Products:

None.

F. Required Reading:

Schmitt, Michael N. "Extraterritorial Lethal Targeting: Deconstructing the Logic of International Law," Volume 52, *Columbia Journal of Transnational Law*. Read pp. 77- 112. **(NWC 1206)**.

United Nations. *The Charter of the United Nations*. June 26, 1945. Scan (Relevant articles: pp. 1–2, 23 [1963 text], 24–25, 27 [1963 text], 33–34, 36–43, 45–46, 48–49, 51–53). (Contained within the *Law of War Documentary Supplement*, pp. v-vi; 1-8). **(NWC 1008A)**.

United States Congress, Joint Resolution, *Authorization for Use of Military Force* [AUMF] Public Law. 107-40 [S.J. RES. 23], September 18, 2001. **(NWC 1198)**.

U. S. Department of the Navy. Naval Warfare Publication 1-14M, *The Commander's Handbook on the Law of Naval Operations*. July 2007. Scan Chapter 5 and Chapters, 8–12. (Issued).

White House Fact Sheet: *U. S. Policy Standards and Procedures for the Use of Force in Counterterrorism Operations outside the United States and Areas of Active Hostilities*, May 23, 2013. (NWC 1085).

G. Supplementary Reading:

OPLAW Overview

General Counsel, U. S. Department of Defense. *DoD Law of Warfare Manual*. June 12, 2015. Table of Contents. (NWC 1208).

Protection and Treatment of Combatants/Non-combatants

Diplomatic Conference for the Establishment of International Conventions for the Protection of Victims of War. *Convention Relative to the Protection of Civilian Persons in Time of War*, August 12, 1949, Articles 13-26 and 47-88. (Contained within the *Law of War Documentary Supplement* 238-240 and 244-251).

_____. *Convention Relative to the Treatment of Prisoners of War*, August 12, 1949, Articles 1-42. (Contained within the *Law of War Documentary Supplement* 199-208), 111.

United States Congress, Joint Resolution. *Affirmation of Authority of the Armed Forces of the United States to Detain Covered Persons Pursuant to the [AUMF]*, NDAA FY2012, Public Law. 112-81, § 1021, December 31, 2011.

Emerging Legal Issues

Dunlap, Major General (Ret) Charles J., Jr. “Lawfare Today . . . and Tomorrow,” in *International Law and the Changing Character of War* 87, Naval War College. (2011).

Hsu, Kimberly and Craig Murray. The U. S.-China Economic and Security Review Commission, “*China and International Law in Cyberspace*”, 6 May 2014.
<http://www.uscc.gov/Research/china-and-international-law-cyberspace>.

Koh, Harold Hongju. “International Law in Cyberspace” USCYBERCOM Inter-Agency Legal Conference, Ft. George G. Meade, MD (September 18, 2012).
<http://www.state.gov/s/l/releases/remarks/197924.htm>

Use of Force

Koh, Harold Hongju. State Department Legal Advisor. "The Obama Administration and International Law" Annual Meeting American Society of International Law (ASIL), (March 25, 2010), Read Subsection III. B., "The Law of 9/11" <http://www.state.gov/s/l/releases/remarks/139119.htm>.

_____. "Statement Regarding Use of Force in Libya" Annual Meeting ASIL, (March 26, 2011), http://www.asil.org/am11/pdfs/haroldkoh/2011_Libya_Harold_Koh_ASIL_Remarks.pdf.

War Powers Resolution of 1973, 50 U.S.C. §§1541-1548.

RULES OF ENGAGEMENT CASE STUDIES (Seminar)

Don't Fire Till You See the Whites of Their Eyes.

—General Israel Putnam or
Colonel William Prescott, Bunker Hill, 1775

A. Focus:

This seminar provides the opportunity to apply the fundamental concepts introduced in previous operational law sessions to multiple real-world, Rules of Engagement (ROE) scenarios. The 2015 U. S. National Military Strategy says, “We now face multiple, simultaneous security challenges from traditional state actors and transregional networks of sub-state groups – all taking advantage of rapid technological change. Future conflicts will come more rapidly, last longer, and take place on a much more technically challenging battlefield... the application of the military instrument of power against state threats is very different than the application of military power against non-state threats.” This ROE section is designed to enhance understanding of how legal, political, and military considerations factor into ROE development as well as ROE-related issues that might arise during coalition operations. Finally, this session focuses on the commander’s role in promulgating and reviewing ROE and responding to apparent ROE/LOAC violations.

B. Objectives:

- Understand the basic principles underlying the use of force in self-defense.
- Understand the principles behind the Standing Rules of Engagement (SROE) and the distinction between conduct-based ROE and status-based ROE.
- Understand the distinction between SROE and the Standing Rules for the Use of Force (SRUF).
- Examine ROE development in the planning process and understand the process by which modifications to ROE are obtained from higher authority.
- Understand the role of political, legal, and military personnel in the formulation of ROE.
- Discuss the role of the commander upon learning of an apparent ROE violation.
- Understand the implications of working with coalition forces and their likely different ROE.

C. Background:

J. Fred Buzhardt, then DoD General Counsel wrote a letter to Senator Edward Kennedy dated 22 September 1972 (and *reprinted in* American Journal of International Law

(AJIL) 124 (1973) stated: “With reference to your inquiry concerning the rules of engagement governing American military activity in Indochina, you are advised that rules of engagement are directives issued by competent military authority which delineate the circumstances and limitations under which United States Forces will initiate and/or continue combat engagement with the enemy. These rules are the subject of constant review and command emphasis. They are changed from time to time to conform to changing situations and the demands of military necessity. One critical and unchanging factor is their conformity to existing international law as reflected in the Hague Conventions of 1907 and the Geneva Conventions of 1949, as well as with the principles of customary international law of which UNGA [United Nations General Assembly] Resolution 2444 (XXIII) is deemed to be a correct restatement.”

Students will be work through various situations using short factual scenarios, videos and other media depicting real world events and dramatic presentations, during which mission specific ROE and the SROE have been applied. Students will be asked to identify ROE issues and critique the efficacy of the ROE as well how the military forces involved interpreted and applied the ROE/SROE.

The point of contact for this session is Captain Robert A. Sanders, LP.D, JAGC, USN; C-424.

D. Discussion Topics:

Who has a role in crafting ROE for a particular mission and why?

How does a joint force and/or a coalition force draft and apply ROE for given operations? What unique ROE issues arise in coalition operations? What methods to resolve?

What is Positive Identification (PID) and what ramification does the requirement for PID have on US forces/ coalition forces?

Describe methods a planning staff can employ to obtain mission specific ROE. How do you draft and seek supplemental ROE?

Who in the chain of command should have/does have the authority to determine hostile intent? Who has the authority to take lethal measures when faced with hostile intent?

In asymmetric warfare what, if any, proactive measures can forces take to assist in determining hostile intent at sea and on the ground?

What considerations impact a commander’s actions when he/she becomes aware of potential violations of the ROE and/or the Law of Armed Conflict?

What role do tactical Directives play *vis-à-vis* ROE? Operation Iraqi Freedom (OIF)/ Operation Enduring Freedom (OEF) examples?

E. Products:

None.

F. Required Readings:

CFLCC Operation Iraqi Freedom ROE Card, 31 Jan 03. (NWC 5011).

Department of Defense DOD Directive 2311.01E, DOD Law of War Program, May 9, 2006 *Incorporating Change 1, November 15, 2010 Certified Current as of February 22, 2011*, <http://www.dtic.mil/whs/directives/corres/pdf/231101e.pdf> (NWC 1185).

International Committee of the Red Cross (ICRC). *Direct Participation in Hostilities: Questions and Answers*, (June 2 2009), available at <http://www.icrc.org/eng/resources/documents/faq/direct-participation-ihl-faq-020609.htm>. (NWC 3072).

McNeal, Gregory S. "The bin Laden Aftermath: Why Obama Chose SEALs, not Drones," *Foreign Policy* (May 5, 2011), available at http://afpak.foreignpolicy.com/posts/2011/05/05/the_bin_laden_aftermath_why_obama_chose_seals_not_drones. (NWC 3160).

U. S. Naval War College. "CJCS Standing Rules of Engagement and Rules for the Use of Force." Extracts from CJCS Instruction 3121.01B. Review as required. (NWC 1062A).

G. Supplementary Readings:

Chairman Joint Chiefs of Staff (2015). *National Military Strategy of the United States of America*. .

International Institute of Humanitarian Law. "Rules of Engagement Handbook" November 2009. (NWC 3091). (Scan examples of mission specific supplemental ROE.)

International Security Assistance Force. News Release (2010) *General Petraeus Issues Updated Tactical Directive*. (NWC 1073).

_____. CDR ISAF [General Allen] Tactical Directive (November 30, 2011). (NWC 1090).

Joint Publication 1-04, *Legal Support to Military Operations*, 17 August 2011, Chapters II (Legal Support to Joint Operational Planning) and III (Legal Support to JTF), http://www.dtic.mil/doctrine/new_pubs/jp1_04.pdf.

Rules of Engagement movie (1) courtroom scene; (2) combat scene:

(1) <http://www.youtube.com/watch?v=BcBJbgJf69A>

(2) <http://www.youtube.com/watch?v=Fp7ihY2aAaY>

U. S. Department of Defense, General Counsel, *DoD Law of Warfare Manual*. June 12, 2015. Scan. Table of Contents. **(NWC 1208)**

OPERATIONAL LAW CASE STUDY (Seminar)

You will usually find that the enemy has three courses open to him, and of these he will adopt the fourth.

— Field Marshal Helmuth von Moltke, the Elder

A. Focus:

This seminar provides the opportunity to apply operational law from the courses prior OPLAW sessions and readings to a real world maritime conflict and to discuss how operational commanders derive authorities for action and force employment within the context of specific military operations.

B. Objectives:

- Analyze the Law of the Sea and Laws of Armed Conflict as pillars upholding and restraints binding a Commander's development of an operational idea into an operational design that is executed across the range of military operations.
- Apply the CJCS SROE and *The Commander's Handbook on the Law of Naval Operations* in a factual context involving employment of military forces.
- Evaluate the evolution of the operational authorities for employment of force during the Iran-Iraq Tanker Wars (1980-1988).

C. Background:

See JMO Sessions 34, 35, and 36.

The point of contact for this session is Captain Robert A. Sanders, JAGC, USN, C-424.

D. Discussion Topics:

Students will work individually to prepare short answers to assigned scenario questions and then lead seminar discussion on their assigned questions.

E. Products:

An in-seminar discussion using a real-world case study and selected questions intended to synthesize the concepts of operational law.

F. Required Reading:

- U. S. Department of the Navy. Naval Warfare Publication 1-14M, *The Commander's Handbook on the Law of Naval Operations*. July 2007. Review as required. (**Issued**).
- U. S. Naval War College. "CJCS Standing Rules of Engagement and Rules for the Use of Force." Newport, RI: Extracts from CJCS 3121.01B. Review as required. (**NWC 1062A**).
- Walker, George K. Selected Readings from *The Tanker War, 1980–88, Law and Policy*. U. S. Naval War College International Law Studies, Volume 74 (2000), Edited by CDR Dan Crouch. (**NWC 3004B**).

G. Supplementary Reading:

- BBC video, "Shooting down of Iran Air 655"
Part 1 of 3: https://www.youtube.com/watch?v=Onk_Wi3ZVME
Part 2 of 3: <https://www.youtube.com/watch?v=50sYFs6p7lk>
Part 3 of 3: <https://www.youtube.com/watch?v=Rgu5FNtpBzM>
- Cordesman, Anthony H. "Iran, Oil, and the Strait of Hormuz," Center for Strategic and International Studies (CSIS) (March 26, 2007), available at <http://csis.org/publication/iran-oil-and-strait-hormuz> (accessed June 24, 2015).
- Council on Foreign Relations. *Crisis Guide: Iran*, CFR Website, http://www.cfr.org/interactives/CG_Iran/embed.html (accessed June 24, 2015).
- Grunawalt, Richard J. "USS Vincennes (CG 49) and the shoot-down of Iranian Airbus Flt 655," NWC Internal Memorandum. (1992).
- Islamic Republic of Iran Mission to the UN. "Address by H.E. Dr. Mahmoud Ahmadinejad President of the Islamic Republic of Iran before the United Nations General Assembly. (September 23, 2011), available at http://gadebate.un.org/sites/default/files/gastatements/66/IR_en.pdf . (accessed June 24, 2015)
- O'Neil, William and Caitlin Talmadge. "Costs and Difficulties of Blocking the Strait of Hormuz." *International Security* 33, no. 3. (Winter 2008/09): 190–198.
- Talmadge, Caitlin. "Closing Time: Assessing the Iranian Threat to the Strait of Hormuz," *International Security* 33, No. 1. (Summer 2008): 82–117.

The President. *Remarks by President Obama in Address to the United Nations General Assembly* (September 21, 2011), <http://www.whitehouse.gov/the-press-office/2011/09/21/remarks-president-obama-address-united-nations-general-assembly>.

U. S. Department of Defense, General Counsel, *DoD Law of Warfare Manual*, 12 June 2015. Chapter XIII-Naval Warfare. (**NWC 1208**).

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U. S. NAVY ORGANIZATION AND EMPLOYMENT (Seminar)

Tell the men to fire faster and not to give up the ship; fight her til' she sinks!

—Captain James Lawrence, USS Chesapeake,
1 June 1813 (War of 1812)

A. Focus:

This session emphasizes how the United States Navy fights today's enemies while preserving the operational agility necessary to respond to uncertain future crisis. As such, this seminar will focus on the organization and employment of naval forces at the high-tactical and operational levels of war. Highlights include roles, missions, core competencies, operational concepts, doctrine, and considerations for employing Navy forces in a joint environment. This session, in conjunction with other Service specific seminars, will broaden the students' comprehension of joint force employment across the range of military operations in pursuit of national interests.

B. Objectives:

- Comprehend the roles and missions of the U. S. Navy and its contribution to the Joint Force.
- Understand how the U. S. Navy is organized to plan, execute, sustain, and train for maritime and joint expeditionary operations in support of the Joint Force Commander (JFC).
- Know broad doctrinal service concepts guiding the employment of naval forces at the high-tactical and operational levels of war.
- Comprehend the Navy's commitment to the Profession of Arms and the principal means by which it achieves decentralized command and control; mission tactics.

C. Background:

This seminar is another opportunity for some students to critically examine specific U. S. military capabilities. This session provides a foundational understanding of USN organization and employment that students will use throughout the Spruance course. Discussions of capabilities and employment considerations will support the Contemporary Operations sessions by providing baseline knowledge of capabilities and doctrine to inform future planners of potential contributions of the naval services for future operational contingencies

The point of contact for this session Commander Daniel Caldwell, USN, C-414.

D. Discussion Topics:

What is the role for the U. S. Navy in today's strategic environment? Has it changed?

Describe how Navy forces organize Command and Control (C2) and how this construct fits within the larger Geographic Combatant Commanders (GCC) and Joint Task Force (JTF) constructs.

How are deployed Navy forces used to support geographic combatant commander theater objectives?

Discuss how Mission Command works within the USN? How Desired Leadership Attributes (DLAs) are applied within the USN?

Do the present capabilities of the Navy meet the requirements stated in its own strategic guidance and doctrine?

E. Products:

None

F. Required Readings:

McManus, Mark. "*United States Navy Command and Control Organization.*" Newport, RI: Naval War College, October, 2011. Scan. (NWC 5050).

U. S. Naval War College, Joint Military Operations Department. Forces/Capabilities HandbookRead: Appendix C, Navy Composite Warfare Commander (CWC) Concept. . (NWC 3153P). (Issued).

U. S. Navy, U. S. Marine Corps, U. S. Coast Guard. *A Cooperative Strategy for 21st Century Seapower*. Washington, D.C.: Headquarters, U. S. Navy, Marine Corps, and Coast Guard. March 2015. Read pp. 1-2, 9-26. (NWC 2134).

United States Navy. Naval Doctrinal Publication (NDP) 1: *Naval Warfare*. Government Printing Office: Washington, D.C. March 2010. Read: pp. 33-35.

_____. *Naval Operating Concept 2010 (NOC)*. Washington, D.C.: Government Printing Office. 2010.

G. Supplementary Readings:

None.

U. S. MARINE CORPS ORGANIZATION AND EMPLOYMENT (Seminar)

Every Marine has an individual responsibility to study the profession of arms. A leader without either interest in or knowledge of the history and theory of warfare—the intellectual content of the military profession—is a leader in appearance only. Self-directed study in the art and science of war is at least equal in importance to maintaining physical condition and should receive at least equal time. This is particularly true among officers; after all, the mind is an officer's principal weapon.

—Warfighting, Marine Corps Doctrinal Publication 1

A. Focus:

This session emphasizes how the Marine Corps fights today's enemies while preserving the operational agility necessary to respond to uncertain future crisis. As such, this seminar will focus on the organization and employment of Marine forces at the high-tactical and operational levels of war. Highlights include roles, missions, core competencies, operational concepts, doctrine, and considerations for employing the Marine Air Ground Task Force (MAGTF) in a joint environment. This session, in conjunction with other Service specific seminars, will broaden the students' comprehension of joint force employment across the range of military operations in pursuit of national interests.

B. Objectives:

- Comprehend the roles and missions of the U. S. Marine Corps and its contribution to the Joint Force.
- Comprehend how the U. S. Marine Corps is organized to plan, execute, sustain, and train for maritime and joint expeditionary operations in support of the Joint Force Commander (JFC).
- Comprehend broad doctrinal service concepts guiding the employment of Marine forces at the high-tactical and operational levels of war.
- Comprehend the Marine Corps' commitment to the Profession of Arms and the principal means by which the Corps achieves decentralized command and control; mission tactics.

C. Background:

Since its founding in 1775, the roles and missions of the Marine Corps have evolved to meet the changing needs of the nation. Originally charged with security for naval stations and ships-of-the-line, the Marine Corps grew to contribute major land formations during The Great War (WWI). Throughout World War II, Marine aviators leveraging lessons from the “Banana Wars” operated from Navy ships and provided close air support to Marine ground units conducting amphibious operations in the Pacific. Today, the Marine Corps contributes to the nation’s defense by providing an expeditionary force in readiness.

The Marine Corps organizes to provide rapidly deployable forces capable of conducting expeditionary operations in any environment. In addition to maintaining the Marine Corps’ unique amphibious capability, the operating forces maintain the capability to deploy by whatever means is appropriate to the situation. Marine forces are organized around a Marine Air Ground Task Force (MAGTF), a scalable task-organized unit consisting of ground, aviation, combat service support, and command elements. Although MAGTFs are organized around base structures, for example the Marine Expeditionary Brigade (MEB), these organizations provide a combined arms force that a single commander can easily tailor to most emerging situations.

Marine operating forces offer the JFC various options for employment. From forward deployed ship-borne MAGTFs to self-sustaining units capable of operating hundreds of miles inland. The Marine Corps provides unique capabilities for a variety of missions. The Marine Corps’ ethos, heritage, and warfighting philosophy influence how the Marine Corps organizes, trains, equips, and employs its operating forces. Concepts such as maneuver warfare, decentralized command and control, and a bias for decision making at the lowest level permeate the Marine mindset. Even well-known watchwords such as “innovate, adapt, and win” are more than simple slogans, and they underpin the Marine Corps’ approach to crisis, conflict, and war.

The point of contact for this session is Lieutenant Colonel Jason P. Brown, USMC, C-403.

D. Discussion Topics:

Describe the roles and mission of the United States Marine Corps.

Discuss the versatility, flexibility, scalability, combined arms capability, types, deployment/employment considerations, and limitations of MAGTFs.

Describe how Marine forces are used to support the Joint Force Commander and functional components (Joint Force Maritime Component, Joint Force Land Component, and so forth).

Discuss the enduring principles that define the identity of Marines and the Marine Corps.

Discuss how the Desired Leadership Attributes (DLAs) are applied within the Marine Corps.

Describe how Mission Command, commonly referred to by Marines as mission tactics or mission orders, works within the Marine Corps.

E. Products:

None.

F. Required Readings:

Service Brief (USMC) Video on USNWC Blackboard. View.

United States Marine Corps. 36th Commandant's Planning Guidance. Washington, D.C.: Headquarters, U. S. Marine Corps, 23 January 2015. Read pp. 4-12. (NWC 1147).

_____. *Expeditionary Force 21. Forward and Ready: Now and in the Future.* Washington, D.C.: Headquarters, U. S. Marine Corps, 4 March 2014. Read pp. 4-15. (NWC 4048).

_____. *Warfighting.* Marine Corps Doctrinal Publication (MCDP) 1. Washington, D.C.: Headquarters, U. S. Marine Corps, 1997. Read: pp. 53-58, 71-90, 93-96.

U. S. Naval War College, Joint Military Operations Department. *Forces/Capabilities Handbook.* Newport, RI: Naval War College, 2014. Scan pp. 69-84. (NWC 3153P). (Issued).

G. Supplementary Readings:

Benes, Thomas A. "The Corps' Return to the Sea," *U. S. Naval Institute Proceedings*. 139, no. 11, (November 2013): 42-46.

Clancy, Tom, *Marine: A Guided Tour of a Marine Expeditionary Unit.* New York, Scribner, 1996.

Gatchel, Theodore L. *At the Water's Edge: Defending Against the Modern Amphibious Assault.* Annapolis, MD: Naval Institute Press, 1996.

Krulak, Lieutenant General Victor H. *First to Fight.* Annapolis, MD: Naval Institute Press, 1999.

Lejeune, Major General John A., Commandant of the Marine Corps. "Relations between Officers and Men." Marine Corps Order No. 29. Washington, D.C.: Headquarters U. S. Marine Corps, 14 August 1920.

O'Connell, Aaron B. *Underdogs: The Making of the Modern Marine Corps.* Boston, MA: Harvard University Press, 2012.

Ricks, Thomas E. *Making the Corps*. New York: Simon and Schuster Inc., 2007.

U. S. Marine Corps. "Marine Corps Expeditionary Operations." *Marine Corps Operations*. Marine Corps Doctrinal Publication (MCDP) 1-0. Washington, D.C.: Headquarters U. S. Marine Corps, 2011. Read 1-1 – 1-5, 1-13 – 1-17, 2-1 – 2-23.

_____. *Command and Control*. Marine Corps Doctrinal Publication (MCDP) 6. Washington, D.C.: Headquarters, U. S. Marine Corps, 1997.

U. S. Office of the Chairman, Joint Chiefs of Staff. "Desired Leader Attributes for Joint Force 2020." CJCS Memorandum, CM-0166-13, June 28, 2013.

Vandergrift, General Alexander A., Commandant of the Marine Corps. "Bended Knee." Speech. Presented to the U. S. Senate Committee on Naval Affairs, Washington, D.C. 6 August 1946.

U. S. COAST GUARD ORGANIZATION AND EMPLOYMENT (Seminar)

The U. S. Coast Guard is a shining example of how well a Federal agency can perform with its flexibility, speed, and expertise.

—Representative Russ Carnahan, (D-Missouri)

A. Focus:

This session emphasizes how the USCG operates in today joint environment while preserving the operational agility necessary to respond to uncertain future crisis. As such, this seminar will focus on the organization and employment of USCG forces both within the joint community and domestic security and support. Highlights include roles, missions, core competencies, operational concepts, and considerations for employing the USCG forces in a joint environment. This session, in conjunction with other Service specific seminars, will broaden the students' comprehension of joint force employment across the range of military operations in pursuit of national interests.

B. Objectives:

- Comprehend the roles and missions of the USCG and its contribution to the Joint Force.
- Comprehend how the USCG is organized to plan, execute, sustain, and train for maritime and joint expeditionary operations.
- Comprehend broad doctrinal service concepts guiding the employment of USCG forces at the high-tactical and operational levels of war.
- Comprehend the USCG's commitment to the Profession of Arms and the principal means by which it achieves decentralized command and control; mission tactics.

C. Background:

This session provides a foundational understanding of U. S. Coast Guard capabilities that students will use throughout the Spruance course. A discussion of mission and capabilities provides baseline knowledge of capabilities and doctrine to inform future planners of potential contributions of these services for future operational contingencies. The Coast Guard is an armed service that has participated in every American war since its inception. Although multi-mission in nature and charged with significant responsibilities in such diverse areas as maritime law enforcement, search and rescue, pollution response and maintaining an aids to navigation system, Coast Guard forces provide military capabilities in support of the national military strategy. In recent combat operations, Coast Guard forces provided to Joint Force Commanders maritime interception operations, port operations and security, coastal sea

control and other mission sets where the smallest U. S. service's expertise can add value. As part of the Department of Homeland Security, the Coast Guard functions as the lead federal agency for maritime homeland security and plays a supporting role for maritime homeland defense. While this new emphasis on homeland security has placed increasing demands on an already over-extended service, the Coast Guard has garnered increasing political support from involvement in 9/11 and Hurricane Katrina.

The point of contact for this session Captain Andy Norris, USCG, SP-214.

D. Discussion Topics:

Discuss the roles of the USCG in today's strategic environment. What are the Service's strengths and weaknesses in the joint operations arena? How is it organized?

Describe/discuss how deployed forces from the USCG are used to support geographic combatant commander (GCC) theater objectives.

How might the Coast Guard's unique authorities and capabilities be leveraged in support of joint military or interagency operations?

Discuss how Desired Leadership Attributes (DLAs) are applied within the USCG.

E. Products:

None.

F. Required Readings:

U. S. Department of Homeland Security. White Paper on the U. S. Coast Guard, "*Safety, Security and Stewardship*" Washington, D.C.: Government Printing Office. 2013. Read pp. 1-9. **(NWC 4104).**

U. S. Naval War College, Joint Military Operations Department. Forces/Capabilities Handbook. Newport, RI: Naval War College, 2014. Scan pp. 125-141. **(NWC 3153P). (Issued).**

G. Supplementary Readings:

None.

U. S. ARMY ORGANIZATION AND EMPLOYMENT (Seminar)

[Y]ou may fly over a land forever; you may bomb it, atomize it, pulverize it and wipe it clean of life—but if you desire to defend it, protect it, and keep it for civilization, you must do this on the ground, the way the Roman legions did, by putting your young men into the mud.

—T. R. Fehrenbach, *This Kind of War*

A. Focus:

This session emphasizes how the Army contributes to the Joint Force while preserving the operational agility necessary to respond to future crisis. This session focuses on the organization and employment of Army forces at the high-tactical and operational levels of war. Highlights include roles, missions, core competencies, operational concepts, doctrine, and considerations for employing Army forces in a joint environment. This session, in conjunction with other Service specific sessions, will broaden the students' comprehension of joint force employment across the range of military operations in support of national interests.

B. Objectives:

- Comprehend the roles and missions of the U. S. Army and its contribution to the Joint Force.
- Comprehend how the U. S. Army is organized to plan, execute, and sustain, operations in support of the Joint Force Commander (JFC).
- Comprehend broad doctrinal service concepts guiding the employment of Army forces at the high-tactical and operational levels of war.
- Comprehend the Army's principal means by which it achieves decentralized command and control; mission tactics.

C. Background:

This seminar is the first formal opportunity for the students to examine critical capabilities and employment considerations for of the U. S. Army. The session will serve as a foundation for understanding how the Army “thinks and operates,” as well as how it arranges and provides forces and capabilities to a joint commander.

The point of contact for this session is Lieutenant Colonel Anthony New, USA, C-411.

D. Discussion Topics:

What is the role of the Army in today's Joint Force? What does Army doctrine say it is?

Describe the operating concept for the Army.

What are the Army's primary formations at the operational and tactical levels of war? Are these formations still relevant to today's operational environment? Why or why not?

How does the Army integrate and leverage joint force capabilities to support and sustain Army operations?

Discuss how Mission Command works within the Army.

E. Products:

None.

F. Required Readings:

U. S. Army. *The Army*, Army Doctrine Publication (ADP) 1. Washington, D.C.: Headquarters, Department of the Army, September 2012. Read pp. 1-1 thru 1-8.

_____. *Unified Land Operations*, Army Doctrine Publication (ADP) 3-0. Washington, D.C.: Headquarters, Department of the Army, October 2011. Read pp. 1-6.

_____. U. S. Army Operating Concept. Washington, D.C.: Headquarters Department of the Army, October 2014. Read pp. 7-10, 16-25. **(NWC 4107).**

U. S. Naval War College, Joint Military Operations Department. *Reference Guide, Forces/ Capabilities Handbook*. Newport, RI: Naval War College, June 2014. Scan pp. 32-68. **(NWC 3153P). (Issued).**

G. Supplementary Readings:

Blackboard Video on Army Capabilities.

U. S. AIR FORCE ORGANIZATION AND EMPLOYMENT (Seminar)

If we are not able to gain and maintain air superiority – which is not a given and it's not easy – if we were unable to do that in a future conflict . . . then everything about the way the United States Army and the United States Marine Corps fight on the ground would have to change. What they buy, how they train, maybe even who they recruit. This is a foundational element of the use of airpower and of joint warfighting.

—General Mark A. Welsh III,
Air Force Chief of Staff

A. Focus:

This session emphasizes how the United States Air Force (USAF) fights today's enemies while preserving the operational agility necessary to respond to uncertain future crises. As such, this seminar will focus on the organization and employment of United States Air Force forces at the high-tactical and at the operational levels of war. Highlights include roles, missions, core competencies, operational concepts, doctrine, and considerations for employing U. S. Air Force forces in a joint environment. This session, in conjunction with other Service specific seminars, is intended to broaden the students' comprehension of joint force employment across the range of military operations in pursuit of national interests.

B. Objectives:

- Comprehend the roles and missions of the USAF and its contribution to the Joint Force.
- Comprehend how the USAF is organized to plan, execute, and sustain joint expeditionary operations in support of the Joint Force Commander (JFC).
- Comprehend broad doctrinal service concepts guiding the employment of USAF forces at the high-tactical and operational levels of war.
- Comprehend the USAF's commitment to the Profession of Arms and the principal means by which it achieves decentralized command and control.

C. Background:

This seminar is an opportunity for the students to examine specific capabilities and organization of the U. S. Air Force. This session will support the Spruance Course curriculum by providing baseline knowledge of Air Force capabilities and doctrine, informing students about what the USAF contribute, to operations throughout the spectrum of conflict.

The point of contact for this session Colonel Adrian Schuettke, USAF, C-412.

D. Discussion Topics:

What are some of the core capabilities of the USAF?

Discuss the role of the USAF in today's strategic environment. How is the Air Force organized?

Describe how deployed USAF forces are used to support geographic combatant commander (GCC) theater objectives.

What deployment model does the Air Force use to provide air and space forces to combatant commanders or subordinate joint force commanders for employment?

What are the roles and responsibilities of a Joint Force Air Component Commander (JFACC) and the Joint Air Component Coordination Element (JACCE)?

Discuss how Desired Leadership Attributes (DLAs) and Mission Command are applied within the USAF.

E. Products:

None.

F. Required Readings:

U. S. Air Force Doctrine Center. Air Force Doctrine Volume 1 – Basic Doctrine (Extract). Air Force Doctrine Center, Maxwell AFB, AL. 27 February 2015. Read pp. 1-23.

_____. Air Force Doctrine Volume 3 – Command (Extract). Air Force Doctrine Center, Maxwell AFB, AL. 5 June 2013. Read pp. 1-28.

U. S. Naval War College, Joint Military Operations Department. Forces/Capabilities Handbook. Newport, RI: Naval War College, 2014. Scan. pp. 85- 124. (NWC 3153P). (Issued).

Welsh, Mark A. General. *Global Vigilance, Global Reach, Global Power for America*, Air & Space Power Journal, April 2014. Read p 4-10. (NWC 4102).

G. Supplementary Readings:

U. S. Air Force. Air Force Doctrine Annex 3-0, *Operations and Planning*. Air Force Doctrine Center, Maxwell AFB, AL. 5 August 2015.

_____. Air Force Doctrine Annex 3-04, *Counter sea Operations*. Air Force Doctrine Center, Maxwell AFB, AL. 7 November 2014.

_____. Air Force Pamphlet 11-403, *Air Mobility Planning Factors*. Headquarters, Air Mobility Command (AMC/A3XP), Scott AFB, IL. 12 December 2011.

U. S. Office of the Chairman, Joint Chiefs of Staff. “Desired Leader Attributes for Joint Force 2020.” CJCS Memorandum, CM-0166-13, June 28, 2013.

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U. S. SPECIAL OPERATIONS FORCES ORGANIZATION AND EMPLOYMENT (Seminar)

The environment in which we find ourselves has changed. Instead of traditional nation-state conflict, both USSOCOM's and USSOF's assigned missions are predominantly focused on addressing the non-state or transnational violent extremist threat.

—Admiral Eric Olson, USN,
Former Commander, USSOCOM

A. Focus:

This session emphasizes how the Special Operations Forces (SOF) contribute to the Joint Force while preserving the operational agility necessary to respond to uncertain future crisis. As such, this seminar will focus on the organization and employment of SOF forces at the high-tactical and operational levels of war. Highlights include roles, missions, core competencies, operational concepts, and considerations for employing SOF in a joint environment. This session, in conjunction with the Service specific seminars, will broaden the students' comprehension of joint force employment across the range of military operations in pursuit of national interests.

B. Objectives:

- Comprehend the roles and missions of the SOF and its contribution to the Joint Force.
- Comprehend how the SOF/U. S. Special Operations Command organized to plan, execute, and sustain operations in support of the Joint Force Commander (JFC).
- Comprehend broad doctrinal service concepts guiding the employment of SOF at the high-tactical and operational levels of war.
- Comprehend the SOF's commitment to the Profession of Arms and the principal means by which it achieves decentralized command and control; mission tactics.

C. Background:

This session provides a foundational understanding of U. S. Special Operations Forces capabilities that students will use throughout the JMO course. Discussions of capabilities will support the Contemporary Operations sessions by providing baseline knowledge of capabilities and doctrine to inform future planners of potential contributions of these services for future operational contingencies. Special Operations Forces (SOF) are small, specially organized units manned by people carefully selected and trained to operate under physically demanding and psychologically stressful conditions to accomplish missions using modified equipment

and unconventional applications of tactics against strategic and operational objectives in hostile, denied, or politically sensitive environments to achieve military, diplomatic, informational and or economic objectives employing military capabilities for which there is not broad conventional force requirement. Since the establishment of the U. S. Special Operations Command (USSOCOM) in 1987, SOF have been under the combatant command of one unified commander and have been trained and equipped to conduct unilateral, joint and combined special operations across the Range of Military Operations. SOF support the geographic combatant commanders, U. S. ambassadors and their country teams, and other government agencies. Additionally, USSOCOM is designated as the lead to synchronize GWOT efforts across DoD. Each military service has established a major command to serve as the service component of USSOCOM.

The point of contact for this session Captain Carl Tiska, USN, C-426.

D. Discussion Topics:

Describe the role of SOF. How is SOF organized? What are some of the future challenges that SOF faces?

What capabilities does SOF provide national decision makers? What are some limitations of SOF? In what ways can operational planners employ SOF to achieve GCC objectives?

U. S. Special Operations Command propounds five ‘SOF Truths:’

- Humans are more important than hardware.
- Quality is better than quantity.
- Special Operations Forces cannot be mass produced.
- Competent Special Operations Forces cannot be created after emergencies occur.
- Most Special Operations require non-SOF assistance

Discuss the relevance and applicability of these ‘truths,’ particularly the fifth ‘SOF Truth.’

What are the advantages and disadvantages to employing SOF as compared to conventional forces?

Discuss how Desired Leadership Attributes (DLAs) and Mission Command are applied within SOF.

E. Products:

None.

F. Required Readings

Malvesti, Michele, “*To Serve the Nation-U. S. Special Operations Forces in an Era of Persistent Conflict*,” Center for a New American Security, June 2010. Read pp. 4, 7-11. (NWC 1127).

_____. “*Policy Considerations in Combating Terrorism: Decision Making Under Conditions of Risk and Uncertainty*”, Combating Terrorism Center at West Point, January 2012. (NWC 1129).

Thomas, Jim and Chris Dougherty, “Beyond the Ramparts-The Future of U. S. Special Operations Forces, Center for Strategic and Budgetary Assessments, 2013. Read pp. 52-77. (NWC 1134).

U. S. Office of the Chairman of the Joint Chiefs of Staff. *Special Operations*. Joint Publication (JP) 3-05. Washington, D.C.: CJCS, 16 July 2014. Read pp. ix – xv.

U. S. Special Operations Command. SOCOM Fact Book 2016. MacDill AFB: Tampa FL. Scan pp. 1-60. (NWC 2120A).

G. Supplementary Readings:

None.

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NAVY COMMAND AND CONTROL (Seminar)

We can never forget that organization, no less than a bayonet or an aircraft carrier, is a weapon of war.

—Congressman Bill Nichols, Hearings for the
Goldwater-Nichols Defense Reorganization Act, 1986

A. Focus:

This session addresses the Navy's management of the Joint Force Maritime Component Commander (JFMCC) organization, responsibilities, and command relationships. It will provide an overview of the Maritime Operations Center (MOC) concept and construct. Finally, it examines the Composite Warfare Commander (CWC) concept and how this model is organized to coordinate multiple warfare functions.

B. Objectives:

- Comprehend the factors of centralized and decentralized command and control to include intent through trust, empowerment, and understanding that support the selection of a specific command and control (C2) option.
- Comprehend the organizational options, structures, and requirements available to the JFMCC.
- Comprehend the basic MOC structure and purpose.
- Comprehend Navy Composite Warfare Doctrine, including the role of the Officer in Tactical Command (OTC) and the OTC relationship to the CWC.

C. Background:

Command and control of maritime forces is shaped by the characteristics and complexity of the maritime domain as well as the traditions and independent culture of the naval service. In centralized command and control, all authority is concentrated in a single commander and a single headquarters. Decentralized command and control relies on subordinate commanders to execute operations independently but in accordance with a thorough understanding of the commander's intent, and command by negation or mission command. The selection of either a centralized or decentralized command and control option depends upon the objective to be accomplished.

Naval command relationships are based on a philosophy of mission command involving centralized guidance, collaborative planning, and decentralized control and execution. With a long-standing practice of using mission-type orders, naval command and control practices are intended to achieve relative advantage by leveraging Boyd's OODA

Loop of observe, orient, decide, and act rapidly. Mission-type orders enable continued operations in environments where communications are restricted, compromised, or denied, allowing subordinates to exercise disciplined initiative, consistent with the higher commander's intent.

The Joint Force Commander (JFC) will often designate a JFMCC to coordinate the activities of maritime forces. In cases where the JFC does not designate a JFMCC, the JFC may elect to directly task maritime forces. The JFC normally designates the forces made available for tasking by the JFMCC, and delegates the appropriate command authority the JFMCC will exercise over assigned and attached forces and maritime assets. Forward deployed maritime force packages are normally comprised of units that train together prior to deploying. These tailored force packages may include Carrier Strike Groups (CSGs) and Amphibious Ready Groups (ARGs) with an embarked Marine Expeditionary Unit (MEU). The JFMCC will normally exercise operational control (OPCON) over assigned service component maritime forces and either OPCON or tactical control (TACON) over attached forces.

The JFMCC's staff is typically built from an existing service component, numbered fleet, Marine Air-Ground Task Force (MAGTF), or subordinate service force staff and then augmented as required. If a Navy component or numbered fleet commander is designated as the JFMCC, his or her existing staff or MOC will normally form the nucleus of the JFMCC staff. In a maritime headquarters, two complementary methods of organizing people and processes exist. The first is the doctrinal Napoleonic J-code structure, which organizes people by the function they perform (i.e., intelligence, logistics). The second is a cross-functional approach that organizes the staff into boards, centers, cell, and working groups. These organizations manage specific processes or tasks that do not fit well under the J-code structure and are best suited to those tasks that require cross-functional participation, such as targeting, assessment, and information operations. The formalized addition of this cross-functional network to the doctrinal J-code organizational structure is what constitutes the MOC. The MOC can be thought of as a loosely-bound network of staff entities overlaying the J-code structure. The MOC's focus is on operational tasks and activities rather than fleet management or support and provides an organizational framework through which maritime commanders may exercise operational level command and control. The MOC was established to address shortfalls in the U. S. Navy's ability to command and control at the operational level of war. This MOC initiative focused on defining and developing operational level headquarters with some degree of baseline commonality around the globe. The MOC provides the framework from which Navy commanders at the operational level (Navy Component Command, Numbered Fleet, and Joint/Combined Force Maritime Component Command) exercise their command and control.

At the tactical level, command and control transitions to the Composite Warfare Commander concept where the OTC is responsible for the tactical force deployment and action. The OTC is the senior officer present eligible to assume command, or the officer to whom the senior officer has delegated tactical command. The commander of a task organization is its OTC when the organization is operating independently. The OTC also designates a CWC to coordinate overall operations. Joint community understanding of these command and control constructs is important when coordinating or working with maritime forces. The OTC controls CWC and subordinate warfare commanders' actions through

“command by negation”. Command by negation acknowledges that in many aspects of often distributed and dispersed maritime warfare, it is necessary to pre-plan the actions of a force to an assessed threat and delegate some warfare functions to subordinate commanders. Once such functions are delegated, the subordinate commander is to take the required action without delay, always keeping the OTC informed of the situation. The CWC orchestrates operations to counter threats to the force, while the OTC retains close control of power projection and specific sea control operations.

The point of contact for this session is Captain Edmund Hernandez, USN, C-402.

D. Discussion Topics:

Why is Mission Command a preferred method of Command and Control for Joint Maritime Operations?

How is a JFMCC staff organized and what are its responsibilities?

Describe the MOC concept, its organization, and how the MOC construct differs from traditional naval structures.

How does the CWC concept seek to minimize seams between various functional areas?

E. Products:

None.

F. Required Reading:

McManus, Mark. “*United States Navy Command and Control Organization.*” Newport, RI: Naval War College, October 2011. (NWC 5050). Read p. 1-13.

U. S. Office of the Chief of Naval Operations. Naval Tactics, Techniques, and Procedures (NTTP) 3-32.1, *Maritime Operations Center*. Washington, D.C.: GPO, April 2013. Read p. 1-1 through 1-11 and p. C-1 through C-5.

_____. Naval Warfare Publication (NWP) 3-32, *Maritime Operations at the Operational Level of War*. October 2008 (with Ch/1). Washington, D.C.: GPO, August 2010). Scan sections 7-1 through 7-17.

_____. Naval Warfare Publication (NWP) 3-56, *Composite Warfare Doctrine*. Washington D.C.: September 2010. Read Ch. 1 and 6, Scan Ch. 2.

U. S. Office of the Joint Chiefs of Staff. *Joint Operations*. Joint Publication (JP) 3-0, Washington, D.C.: CSJS, 20 August 2011. Read p. III-1 through III-19.

_____. *Command and Control for Joint Maritime Operations*. Joint Publication (JP) 3-32, Washington D.C.: CJCS, 7 August 2013. Read p. II-1 through II-13.

Vego, Milan. *Joint Operational Warfare, Theory and Practice*. Newport, RI: U.S. Naval War College, 2009. Read “Operational Command and Control” p. X-19 through X-28. **(Issued)**.

G. Supplementary Readings:

Vego, Milan. *Operational Warfare at Sea: Theory and Practice*. New York: Routledge, 2009.

U. S. Naval War College, Joint Military Operations Department. *Forces/Capabilities Handbook*. Newport, RI: Naval War College, 2014. **(NWC 3153P). (Issued)**.

LOGISTICS AND DEPLOYMENT (Seminar)

The war has been variously termed a war of production and a war of machines... Whatever else it is, so far as the United States is concerned, it is a war of logistics. The ways and means to supply and support our forces in all parts of the world – including the Army of course – have presented problems nothing short of colossal and have required the most careful and intricate planning.

— Admiral Ernest King,
Operation WATCHTOWER, 1942

A. Focus:

This session provides an overview of the operational function logistics, combined with an introduction to the deployment process, which are critical for success in operational art. This seminar session will include analysis and discussion of the imperatives of logistics, and examine the Navy's fleet and Joint Force Maritime Component Commanders' role in planning, coordinating, and synchronizing joint and maritime logistics and strategic deployment. This session follows a discussion of Naval Command and Control with discussion of options for controlling logistics and deployment at the tactical and operational levels of war, and includes consideration of logistics within the context of the operational functions, particularly operational maneuver and fires. An overview of joint logistics doctrine, concepts and principles will be included. This session will introduce the national deployment system (strategic triad) through an examination of the organization and mission of U. S. Transportation Command (USTRANSCOM) and its subordinate component commands and their role in deploying joint forces in support of global contingencies.

B. Objectives:

- Comprehend and describe the relationship among the elements of strategic, operational, and tactical logistics functions, and understand the relationship of logistics relative to the other operational functions and factors.
- Comprehend and describe the definitions, authorities, and responsibilities for intra-theater and inter-theater logistics support and sustainment.
- Describe the elements of the strategic deployment triad, which focuses on transportation and sustainment by land, sea and air.

- Analyze the role and perspective of the joint force and Maritime Component Commanders in the importance of the logistics estimate in the planning process. Identify and analyze specific logistics issues that must be addressed when conducting a logistics estimate and how to apply them in the planning process for a strategic deployment and an operation.
- Evaluate and assess the commander's operational concept in its feasibility, sustainability and responsiveness to achieve operational objectives.

C. Background:

Sustainment is one of the six joint functions and is the provision of logistics and personnel services necessary to maintain and prolong operations until mission accomplishment and redeployment of the force. Deployment and distribution are combined as one of the seven core joint logistics functions that also include supply, maintenance, logistics services, operational contract support, engineering, and health services.

Note that as discussed in the seminar on Operational Functions (JMO-16), there are slight differences in the terminology described by Professor Vego regarding his description of the operational functions and the name of the operational functions described in Joint Doctrine. For the purposes of this seminar, we will discuss logistics and sustainment within the same broad category as those essential functions required to equip, sustain, support and deploy joint and naval forces.

Logistics include all those supporting activities required to sustain a deployed force. Strategic deployment includes the transportation of people, equipment, supplies, and other commodities by land, sea, and air, to enable military force projection. Logistics concern the integration of strategic, operational and tactical support efforts within the theater, while scheduling the mobilization and movement of forces and material to support the joint force commander's operational concept.

In setting the conditions for operational success, several component and joint force commanders have said that the most important things to get right in their commander's intent must include command & control, basing and sustainment (logistics). These concepts must be feasible, sustainable, integrated and synchronized within the other operational functions, and with respect to factors time, space and force. Further, they must consider strategic deployment and distribution early and throughout the joint planning process, particularly due to lead times required to source, prepare and deploy forces globally.

The ability of the U. S. military to successfully carry out its assigned tasks in support of the National Security Strategy and National Military Strategy depends greatly on its logistics and deployment capabilities to deploy forces, equip, and sustain them in a theater of operations in a timely manner. The operational commander must have a clear understanding of the capabilities and limitations of the strategic deployment and distribution processes to execute a major operation or campaign successfully. Force selection, phasing of operations, and risk assessment are directly tied to the ability to project forces and logistics to the area of responsibility, area of operation, or theater of war and, once deployed, sustain them over time.

Even though logistics are normally a service responsibility, the combatant commander retains Directive Authority for Logistics (DAFL) and must decide “if and when” it is appropriate to exercise that authority. The Logistics portion of this session provides an overview of the fundamentals of operational logistics to include the core logistics functions and principles. It identifies logistics tools that enable the geographic combatant commander to execute logistics responsibilities in the operational area. These tools include Directive Authority for Logistics, Executive Agency (EA), lead service, Common User Logistics (CUL), joint logistics boards, Acquisition Cross Service Agreements (ACSA), and (multinational) coalition/contract logistics.

The strategic deployment portion of this session focuses on the “move the force” functional capability. While the Joint Staff J3 serves as the DOD joint deployment process owner, USTRANSCOM serves as DOD’s Mobility Joint Force Provider, Single Manager for Defense Transportation and Single Manager for Patient Movement. Their charter is to maintain and operate a deployment system for orchestrating the transportation aspects of worldwide mobility planning, integrating deployment-related information management systems, and providing centralized wartime traffic management. Actual movement is executed by USTRANSCOM’s component commands: Military Surface Deployment & Distribution Command (SDDC—Army), Military Sealift Command (MSC—Navy), and Air Mobility Command (AMC—Air Force). The Department of Transportation’s Maritime Administration (MARAD) bridges MSC, U. S. flag commercial carriers for sealift procurement and operations.

In the initial steps of the deliberate planning process, the JTF staff develops CONOPs along with task organization (Annex A) and a prioritized movement plan, communicated in Annex A, Appendix 1, Time-Phased Force Deployment List (TPFDL). As the planning process continues, the TPFDL is substantiated and codified as the TPFDD or Time Phased Force Deployment Data. The TPFDD serves as the JTF commander’s primary tool for managing the flow of forces/ capability into the area of operations. The supported CCDR reviews and validates the lift requirements within the specific TPFDD window and notifies USTRANSCOM that the movement requirements are ready for lift scheduling. USTRANSCOM uses the TPFDD to employ each leg of the Strategic Mobility Triad to project power. The Strategic Mobility Triad consists of pre-positioned material, sealift and airlift.

Point of contact for this session is Lieutenant Colonel Troy Rittenhouse, USA, C-404.

D. Discussion Topics:

Are logistics and sustainment the same/different? Where do logistics (sustainment) rank against the other operational functions/joint functions? When should logistics be considered during the planning process and why?

What are the Joint Force Commander or Naval Component Commander’s options for organizing and controlling operational logistics?

What tools are available to the combatant commander to balance joint logistics efficiency and effectiveness? What are the advantages and disadvantages associated with those options?

What critical logistics issues must be properly addressed when planning joint operations and why? How does the “logistics estimate” serve as a tool to facilitate critical logistics planning?

What are the major planning considerations of each leg of the strategic deployment triad?

How does the combatant commander or the JTF interface with USTRANSCOM? What is the supported/supporting command relationship?

What are the major planning considerations facing operational planners in deploying a Force to the theater of operations?

How does the JTF use the TPFDD to manage the movement of forces into the area of operations?

E. Products:

None.

F. Required Readings:

U. S. Army Command and General Staff College. “Operational Logistics Planning.” Fort Leavenworth, KS: March 2009. Read pp. 4-16 to 4-27. (NWC 3166).

U. S. Office of the Chairman of the Joint Chiefs of Staff. *Doctrine for Logistic Support of Joint Operations*, Joint Publication (JP) 4-0. Washington, D.C.: CJCS, 16 October, 2013. Read Executive Summary (ix–xvi); Chapter I (all); Chapter II (II-1 to II-12); Chapter III (III-1 to III-3; Scan remainder of chapter); Read Appendix B. Scan: Appendices C, D, and E.

_____. *Deployment and Redeployment Operations*, Joint Publication (JP) 3-35. Washington, D.C.: CJCS, 31 January 2013. Read Chapters I and III, Scan: Appendices A & B.

_____. *Joint Task Force Headquarters*, Joint Publication (JP) 3-33. Washington, D.C.: CJCS, 30 July 2012. Scan Executive Summary (xvi–xvii). Read Annex F to Appendix A (A-F-1 through A-F-6), *Checklist for Joint Task Force J-4*.

U. S. Naval War College, Joint Military Operations Department. *Reference Guide, Forces/ Capabilities Handbook*. Newport, RI: Naval War College, June 2014. Read pp. 155-170. (NWC 3153P). (Issued).

G. Supplementary Readings:

Akin, Mark W. and George L. Topic. “Transforming Joint Operational-Level Logistics” *Joint Force Quarterly* Issue 47 (4th quarter 2007).

- Creveld, Martin Van. *Supplying War: Logistics from Wallenstein to Patton*. Cambridge, United Kingdom: Cambridge University Press, 1997.
- Eccles, Henry E. *Logistics in the National Defense*. Newport, RI: Naval War College Press, 1997.
- Lynn, John A., ed. *Feeding Mars: Logistics in Western Warfare from the Middle Ages to the Present*. Boulder, CO: Westview Press, 1993.
- Mordente, Patrick, Paul Needham, Theodore Ogren, “Logistics for the 21st Century – Deployment Distribution Center, Quick Fix or Long-Term Solution?” *Air Force Journal of Logistics* 3 No. 4 and 31 No. 1 (Winter 2006/Spring 2007).
- Morgan, John. “War Feeding War? The Impact of Logistics on the Napoleonic Occupation of Catalonia.” *Journal of Military History* No. 73 (January 2009): 83-116.
- O’Hanlon, Michael E., *The Science of War, Defense Budgeting, Military Technology, Logistics and Combat Outcomes*. Princeton, NJ: Princeton University Press, 2009.
- Peterson, Mike W. “Rapid Port Opening Elements - SDDC’s newest units are logistics first responders,” *TRANSLOG, The Journal of Surface and Deployment Distribution*, (Fall 2009).
- U. S. Navy. Office of the Chief of Naval Operations. *Naval Logistics*. Naval Doctrine Publication (NDP) 4. Washington, D.C.: Department of the Navy, CNO, 20 February 2001.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Deployment and Redeployment Operations*. Joint Publication (JP) 3-35. Washington, D.C.: CJCS, 7 May 2007.
- _____. *Joint Doctrine for the Defense Transportation System*. Joint Publication (JP) 4-01, Washington, D.C.: CJCS, 19 March 2003.
- _____. *Sealift Support to Joint Operations*, Joint Publication (JP) 4-01.2. Washington, D.C.: CJCS, 22 June 2012. Read Chapter I. Scan Chapters III and IV.
- U. S. Transportation Command. *Understanding the Defense Transportation System*. Handbook 24-2. 6th ed. Scott AFB, IL: 30 January 2009.
- Wade, Norman M., ed. *The Sustainment and Multifunctional Logistician’s Smartbook*. 2d Revised Edition. Lakeland, FL: The Lightning Press, 2009.

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OPERATIONAL INTELLIGENCE FOR THE MARITIME COMMANDER (Seminar)

By 'intelligence' we mean every sort of information about the enemy and his country – the basis, in short, of our own plans and operations.

—Carl von Clausewitz,
On War, 1832

A. Focus:

Intelligence, as a discipline and an operational function, is essential to the successful conduct of military operations in both peacetime and war. Intelligence operations are often described as a high-demand/low-density enterprise, meaning requirements routinely outstrip available resources. It is therefore imperative intelligence resources be utilized as efficiently as possible and be driven by a clear set of priorities informed by commander's intent and guidance. This will ensure limited resources are applied against the commander's most pressing concerns.

This seminar focuses on the nature and principles of intelligence, the responsibilities of both the joint force and maritime commander and the duties of the staff intelligence officer/J2/N2, primarily at the operational level. In particular, this seminar will explore the critical nature of the commander's relationship with the intelligence officer, and how commander's priorities and Priority Intelligence Requirements (PIRs) drive the intelligence process to support operational decision-making. Additionally, the class will examine the importance of the Intelligence Estimate and Joint Intelligence Preparation of the Battlespace (JIPOE), and how they support the Joint Operations Planning Process (JOPP) and, in turn, the Navy Planning Process (NPP).

B. Objectives:

- Understand joint doctrinal terminology relating to intelligence, including the intelligence process and associated intelligence functions.
- Understand how the intelligence process is synchronized to support decision-making and operational planning, specifically towards a more comprehensive understanding of the adversary and the operational environment.
- Examine intelligence organizations and operational-level integration.
- Comprehend the roles and responsibilities of the commander and the intelligence officer in the intelligence process at the operational level.
- Assess how intelligence has been utilized - optimally or less so – in historical context, to determine enduring lessons and consider implications for future joint military and navy planning and operations.

C. Background:

History provides numerous examples of military and political leaders' quests for detailed information regarding their enemies. From Sun Tzu and Alexander the Great to the present day, leaders' thirst for information to help make informed decisions has only increased with the progress of information technology. To this end, the United States has developed, over time, an intelligence community of considerable scale and budget. Beginning with personnel dedicated to intelligence duties in the Continental Army, to the establishment of the Office of Naval Intelligence in 1882, military intelligence led the way to more expansive national intelligence operations, namely the Office of Strategic Services (OSS) during World War II. The OSS evolved into the first permanent peacetime—and largely civilian—intelligence agency, the Central Intelligence Agency (CIA), following the war. Since that time, dedicated intelligence departments and operations have proliferated throughout the U. S. government. Currently there are 17 federal agencies with significant intelligence sections that comprise the overall U. S. Intelligence Community (IC). As one of the recommendations from the 9/11 Commission, and in an attempt to manage and coordinate these intelligence operations optimally, Congress and President George W. Bush established a Director of National Intelligence (DNI) in 2004.

The IC covers a broad waterfront, from providing intelligence on a daily basis to the President and key personnel in the National Security Council and cabinet, to informing the theater-wide plans and operations of geographic combatant commanders, all the way down to providing actionable intelligence at the tactical level. While agencies of the IC, guided by the DNI, principally provide intelligence to national-level decision-makers, it is the Joint Intelligence Officer (J2) who is responsible for providing intelligence to the Joint Force and the N2 who is responsible for providing intelligence to naval forces. From the Joint Staff J2 at the national level, through Combatant Command J2s and Joint Task Force J2s at the theater-strategic and operational level, to N2s at the operational and tactical levels, operational intelligence plays a key role within the U. S. military. Operational intelligence supports military strategy, theater-wide campaign plans, joint operations, maritime operations and tactical actions in all domains.

To this end, operational intelligence has the key role of providing the commander and staff a deep understanding of the operational environment and enemy (or potential enemy) threat. This includes detailed predictive assessments of the enemy military forces, including capabilities and intent, but extends further to include a wide range of environmental, cultural and political factors that affect maritime, joint and multi-national operations. This process is termed the Joint Intelligence Preparation of the Operational Environment (JIPOE). The requirement for this wide-ranging assessment of the enemy and the operational environment existed since the earliest days of intelligence.

Despite the considerable capabilities the U. S. Intelligence Community brings to the joint force and maritime operations, they remain imperfect, and the conduct of intelligence remains as much an art as a science. Intelligence has had its share of failures, both through inaccuracy or even absence, which has had detrimental effects on some national policy decisions and military operations. Even when intelligence is accurate, timely and predictive, it has sometimes been poorly appreciated, or even disregarded, by both military and civilian leaders, with corresponding ill effects on operations. It is therefore critical senior decision-

makers and staff planners alike be critical consumers of intelligence, partnering closely with intelligence professionals and organizations to ensure the adversary and the operational environment are as well analyzed and comprehended as possible before committing forces and people to combat.

The point of contact for this session is Captain Fred Turner, USN, C-430.

D. Discussion Topics:

What is operational intelligence? How does it differ from strategic and tactical intelligence?

How is the intelligence process synchronized to support operational decision-making, as well as joint and navy planning? What specific intelligence products does the J2/N2 bring to bear?

How does the intelligence officer at the operational level leverage the capabilities of the intelligence community for military operations and tactical actions?

Intelligence must be driven by a clearly defined set of priorities to ensure limited resources are applied against the most critical intelligence needs. What is the military decision-maker's role in defining these priorities? What are the characteristics of a *critical consumer* of intelligence?

What are some of the intelligence challenges associated with multinational operations?

What is the relationship between intelligence officer and commander/decision maker?

What is the future of joint and maritime intelligence? What does the commander need to make decisions in the likely operational environment of the future?

E. Products:

Students will lead a seminar discussion and critique optimal and sub-optimal uses of intelligence through several case studies that present historical events from a variety of perspectives and will determine potential commander's priority intelligence requirements for U. S. naval forces in a fictional scenario.

F. Required Readings:

Flynn, Michael T. "Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan." Washington, D.C.: Center for New American Study. January 2010. (NWC 2081).

Ford, Christopher A., and David A. Rosenberg. "The Naval Intelligence Underpinnings of Reagan's Maritime Strategy." *Journal of Strategic Studies* 28, no. 2 (Apr 2005): 379-409. (NWC 4141).

Jacoby, L. E. "Operational Intelligence: Lessons from the Cold War." United States Naval Institute, Proceedings 125, no. 9 (Sep 1999): 102-104. (NWC 4139).

Shuster, Richard. U. S. Naval War College. Joint Military Operations Department. "Intelligence, Leadership, and Decisive Victory at Midway." Newport, RI: Naval War College, 2011. (NWC 2080).

U. S. Naval War College, Joint Military Operations Department. Table Top Exercise #3 PRC / Taiwan Vignette. Newport, RI: Naval War College. 2015. Read pp. 1-3. (NWC 4027E).

U. S. Office of the Chairman of the Joint Chiefs of Staff. *Joint Intelligence*, Joint Publication (JP) 2-0. Washington, D.C.: CJCS, 22 October 2013. Read Executive Summary and Chapter III. Scan Chapters I, IV and V.

G. Supplementary Readings:

Hooker, Gregory. *Shaping the Plan for Operation Iraqi Freedom: The Role of Military Assessments*. Washington, D.C.: The Washington Institute for Near East Policy, 2005.

Ilardi, Gaetano Joe. "al Qaeda's Operational Intelligence – A Key Prerequisite to Action." *Studies in Conflict and Terrorism*, 31 (2008): 1072-1102. (NWC 2078).

Jones, Garrett. "Working with the CIA," *Parameters* (Winter 2001–02): 228–39.

Layton, RADM Edwin T. *"And I Was There": Pearl Harbor and Midway – Breaking the Secrets*. Annapolis, MD: Naval Institute Press, 2006.

Mansoor, Colonel Peter R. and Major Mark S. Ulrich. "Linking Doctrine to Action: A New COIN Center-of-Gravity Analysis," *Military Review* (September-October 2007): 21-27.

Metz, Thomas F. "OIF II: Intelligence Leads Successful Counterinsurgency Operations." *Military Intelligence Professional Bulletin* 31, no. 3 (Jul-Sep 2005): 10-15.

U. S. Office of the Chairman of the Joint Chiefs of Staff. *Joint and National Intelligence Support to Military Operations*, Joint Publication (JP) 2-01. Washington, D.C.: CJCS, 7 October 2004.

_____. *Joint Intelligence Preparation of the Operational Environment*, Joint Publication (JP) 2-01.3. Washington, D.C.: CJCS, 21 May 2014.

_____. *Joint Task Force Headquarters*, Joint Publication (JP) 3-33. Washington, D.C.: CJCS, 30 July 2012.

Vego, Milan. "Operational Intelligence." *Joint Operational Warfare: Theory and Practice*.
Newport, RI: Naval War College, reprint 2009.

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INFORMATION OPERATIONS AND CYBERSPACE OPERATIONS (Seminar)

The profoundest truth of war is that the issue of battle is usually decided in the minds of the opposing commanders, not the bodies of their men.

—Captain Sir Basil Liddell Hart,
British Army

A. Focus:

The focus of this session is to develop an understanding of how *Information and Cyberspace* may be used in the pursuit of military objectives and political ends in contemporary conflict. Broadly speaking, all operations are in the end ‘influence’ operations. In other words, short of unconditional surrender military operations are undertaken to influence an adversary to make a decision favorable to larger U. S. objectives. As such, the integrated employment of information-related capabilities (IRCs) and cyberspace operations is central to achieving the commander’s objectives at every level of warfare.

With the emergence of information as key terrain in modern warfare, how we use the Information Environment (IE) and its contemporary subset cyberspace to inform, persuade, and influence decision makers can be a key element of modern warfare. What moves through cyberspace is information in the form of code (software) that is displayed as content on graphic user interfaces of the electronics we use daily. Effectively using information operations (IO) and cyberspace operations (CO) in support of objectives and ends will be crucial enablers in future conflict; many of our current and potential adversaries clearly understand this maxim.

B. Objectives:

- Comprehend the principles, strengths, and limitations of integrating information operations and cyberspace operations into service and joint planning.
- Comprehend how IO and CO are used to inform, persuade, and influence decision makers across the spectrum of conflict.
- Comprehend the relationships between lethal and non-lethal fires in developing IO and CO objectives and tasks that support the Joint Force Commander’s mission and objectives.
- Examine the use of cyber warfare in the pursuit of military objectives and political ends.
- Comprehend the ability of cyberspace operations to achieve mass destruction and effects.

C. Background:

Understanding *Information* as an element of national and military power; how it is moved, prioritized, analyzed and synthesized to support decision makers has been vital to warfare throughout history. The confluence of information connectivity, content and cognition combine to form the Information Environment (IE) a term of art in U. S. joint doctrine. The IE is not new and is used by decision makers as data is collected and prioritized to create information. That information is synthesized into knowledge that decision makers leverage to make decisions. Information is also manipulated to influence friend and foe to act in specific ways.

Cyberspace (much like the sea) is a domain in which humans maneuver in and through to achieve objectives in the physical spaces where they live. What has changed in the information age are the speed at which information moves around the world, its range, and depth of penetration into society, and the continuous invention and adaptation of electronics, software, and content for human and automated use. The speed, range, and depth of the movement of information are made possible by the largely man-made domain of cyberspace.

In what can be seen as the intertwining of cyberspace and human activity, the number of humans utilizing cyberspace for commonplace activities (communication, navigation, news, shopping, banking, entertainment, etc.) is rapidly accelerating. Examples of the scope of global activity in cyberspace in the early 21st century include approximately 2.5 billion internet users (or 33 percent of people on Earth); six billion mobile cellular subscriptions; and more than 1 billion Facebook™ users. In fact the U. S. Department of Defense (DoD) operates over 15,000 networks and more than seven millions edge devices (electronic computing devices that provide entry points to move code and content around the internet).

Cyberspace is defined in US joint doctrine as a global domain within the information environment consisting of the interdependent network of information technology infrastructures and resident data, including the Internet, telecommunications networks, computer systems, and embedded processors and controllers. Joint Publication 3-13 *Information Operations*, characterizes IO as “The integrated employment, during military operations, of information-related capabilities (IRCs) in concert with other lines of operations to influence, disrupt, corrupt, or usurp the decision making of adversaries and potential adversaries while protecting our own.”

In an effort to bring together the concepts of cyberspace operations, information operations, and warfare in the physical domains, the DoD has moved the lexicon of cyberspace operations towards terminology that is recognizable to war fighters in all domains. The constructs of Offensive Cyberspace Operations (OCO) and Defensive Cyberspace Operations (DCO) were developed to standardize the terminology and allow war fighters to better communicate across domains.

Code and content are clearly reshaping the operating environment as we continue to intertwine cyberspace with nearly all aspects of life. Understanding how they move through cyberspace and are used as force to inform, persuade, and influence decision-makers and to make electronics act independent of the owner’s intent will be fundamental to success in twenty-first century conflict. This session is intended as a foundation for understanding of how IO and CO can be leveraged to achieve success across the spectrum of operations.

The point of contact for this session is Professor Dick Crowell, C-421.

D. Discussion Topics:

Can modern conflicts be won by the use of lethal operations alone? Explain your answer.

Why is information considered an element of national power?

Identify how joint force commanders can use information-related capabilities to inform, persuade, and influence decision makers across the spectrum of conflict.

Can cyberspace be controlled? If so, what impact does that control have on operations in the traditional domains of war? Can cyber control be disputed or denied? If so, provide some examples.

What lessons for future operations can be drawn from both the Libyan government and the opposition forces use of cyber technologies and information-related capabilities in the 2011 revolution?

Explain how potential adversaries might use cyber warfare against the United States or our allies.

E. Products:

None.

F. Required Readings:

Crowell, Richard M. "Some Principles of Cyber Warfare." Newport, RI: U. S. Naval War College, Joint Military Operations Department, January 2014. Scan pp. 1-21; Read pp. 22-39. (NWC 2160).

_____. "War in the Information Age: A Primer for Information Operations and Cyberspace Operations in 21st Century Warfare" Newport: Naval War College, January 2015 (NWC 2021D).

Fahrenkrug, David T. "Countering the Offensive Advantage in Cyberspace: An Integrated Defensive Strategy." NATO Center for Cyber Defense Centre of Excellence, Tallinn, 2012. (NWC 2161).

Reilly, Robert R. "Information Operations: Successes and Failures." Westminster Institute, 2013. (NWC 2163).

Scott-Railton, John. "Revolutionary Risks: Cyber Technology and Threats in the 2011 Libyan Revolution." CIWAG case study series 2013, eds. Richard Crowell, Marc Genest, and Andrea Dew. Newport, RI: U. S. Naval War College, Center on Irregular Warfare and Armed Groups, 2013. (NWC 3176).

U. S. Office of the Chairman of the Joint Chiefs of Staff. Joint Publication (JP) 3-12R, *Cyberspace Operations*. Washington, D.C.: CJCS, 2013. Scan.

_____. Joint Publication (JP) 3-13, *Information Operations*. Washington, D.C.: CJCS, Incorporating Change 1 November 20, 2014. Scan Executive Summary, Chapters 1, and 2. Read Chapter 4.

G. Supplementary Readings:

Chisholm, Donald. "The Risk of Optimism in the Conduct of War." *Parameters* 33, no. 4 (Winter 2003): 114–131.

Crowell, Richard M. "Analyzing Hybrid Warfare." Newport RI: Naval War College, November 2014. (NWC 3084C).

_____. "Hung on the Old Bridge like Slaughtered Sheep." Newport RI: Naval War College, August 2009. (NWC 2074).

Darley, William M. "Clausewitz's Theory of War and Information Operations." *Joint Force Quarterly*. No. 40 (1st Quarter 2006): 73–79.

Deibert, Ronald. *Black Code: Inside the Battle for Cyberspace*. Toronto: McClelland & Stewart, 2013.

Dombrowski, Peter and Chris C. Demchak. "Cyber War, Cybered Conflict, and the Maritime Domain." *Naval War College Review* (Spring 2014).

Lamb, Christopher J. "Information Operations as a Core Competency." *Joint Force Quarterly* No. 36, (1st Quarter 2005): 88–96.

Mullen, Michael G. "Strategic Communication: Getting Back to Basics." *Joint Force Quarterly* No. 55 (4th Quarter 2009): 2-4.

Olson, Parmy. *We are Anonymous: Inside the Hacker World of LulzSec, Anonymous, and the Global Cyber Insurgency*. New York: Little, Brown and Company, 2012.

Payne, Kenneth. "The Media as an Instrument of War." *Parameters* 35, no. 1 (Spring 2005): 81–93.

- Schmitt, Michael N. Ed. "The Tallinn Manual on the International Law Applicable to Cyber Warfare." Cambridge: Cambridge University Press, 2013.
- Steele, Robert D. *Information Operations: Putting the 'I' Back in DIME*. Strategic Studies Institute. Carlisle Barracks: U. S. Army War College, February 2006.
- U. S. Army. "Bullets & Blogs – New Media and the Warfighter." Center for Strategic Leadership, U. S. Army War College and The SecDev Group, 2009.
- Wald, Charles. "New Thinking at EUCOM the Phase Zero Campaign." *Joint Force Quarterly* No. 43 (4th Quarter 2006): 72–75.
- Warner, Michael. "Cybersecurity: A Pre-history." *Intelligence and National Security*, 27:5, (2012).
- Woods, Kevin M. *Iraqi Perspectives Project: A View of Operation Iraqi Freedom from Saddam's Senior Leadership*. Suffolk, VA: Joint Center for Operational Analysis. United States Joint Forces Command, 2006.

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CONFLICT TERMINATION: DEFEAT MECHANISMS AND CRITERIA (Seminar)

Planning for termination and post-conflict operations should begin as early as possible. It must be an interagency, multinational, integrated effort.

—Professor William Flavin,
U. S. Army War College

A. Focus:

This session examines the termination of armed conflict at the operational level of war. It focuses on how the successful application of defeat mechanisms can achieve objectives and how termination criteria can ensure the continued military leverage recently won through the defeat of enemy forces.

B. Objectives:

- Understand how defeat mechanisms can aid in the destruction or capture of enemy forces.
- Examine how termination criteria assist in the preservation of the advantages gained through combat.
- Analyze the relationship between defeat mechanisms and termination criteria in the planning and execution of combat at the operational level of war.

C. Background:

The purpose of combat is to defeat armed enemies through the organized application of force to kill, destroy, or capture by all means available. Defeat mechanisms and termination criteria play a complementary role in ensuring military victory. The use of defeat mechanisms enables a force to focus on what is necessary to compel the enemy to surrender. According to Joint Publication 5-0 *Joint Operation Planning*, there are two basic defeat mechanisms—attrition and disruption. The former is the destruction of a force's material capabilities while the latter is the destruction of a force's cohesive and coordinated organization. Generally speaking, attrition is often seen as a more costly alternative to disruption.

Defeat mechanisms are the methods used by forces to produce physical or psychological effects in accomplishing objectives against enemy opposition. Commanders then translate these effects into tasks to subordinate forces. Defeat mechanisms—which include destroy, dislocate, disintegrate, and isolate—are often used in combination to increase their effectiveness. The destruction of forces through lethal combat power can occur

with a decisive attack or in a series of actions over time. Dislocation compels the enemy to react to a specific action in a way that places the enemy force in an unfavorable position. Disintegration aims to degrade enemy capabilities through the disruption of command and control, denying the enemy situational awareness. Isolation denies the enemy access to capabilities in order to limit the enemy's ability to conduct operations effectively or to influence events on the battlefield.

The development of termination criteria is a critical step in the planning process. These criteria are the conditions that must be met before the conclusion of an operation. In the early stages of planning, it is incumbent upon commanders and their staffs to identify the conditions that should exist in order to terminate military operations on terms favorable to the victorious force. Not doing so could jeopardize the advantages gained through a successful operation and place higher level objectives at risk. Termination criteria must be briefed to Secretary of Defense to ensure the criteria are linked to the attainment of strategic end states. The development and use of defeat mechanisms and termination criteria are critical to long-term success.

The point of contact for this session is Professor Richard Shuster, C-422.

D. Discussion Topics:

How are defeat mechanisms employed to achieve objectives?

What is the role of a commander in developing termination criteria?

How can termination criteria facilitate the consolidation of victory and long term success?

What is the relationship between defeat mechanisms and termination criteria?

E. Products:

None.

F. Required Reading:

Hecht, Eado. "Defeat Mechanisms: The Rationale Behind the Strategy." *Infinity Journal*, Volume 4, Issue 2, Fall 2014. (NWC 5060).

U. S. Office of the Chairman, Joint Chiefs of Staff. *Joint Operation Planning and Execution System* (JOPES). Volume I, Planning Policies and Procedures. Washington, D.C.: CJCS, 29 September 2006. Read B-13—B-15.

_____. *Joint Operation Planning*. Joint Publication (JP) 5-0. Washington, D.C.: CJCS, 11 August 2011. Read III-18 to III-20, pp. III-38 to III-44.

G. Supplementary Reading:

- Berdal, Mats R. *Disarmament and Demobilization after Civil Wars: Arms, Soldiers and the Termination of Armed Conflicts*. New York, Oxford University Press, 1996.
- Boulé, John R. “Operational Planning and Conflict Termination” *Joint Force Quarterly* Issue 29 (Autumn/Winter 2001–2002): 97–102.
- Cordesman, Anthony. “Iraq and Conflict Termination: The Road to Guerrilla War?” Washington, D.C.: Center for Strategic and International Studies, 28 July 2003.
- Fondaw, Jeffrey E. “Conflict Termination: Considerations for the Operational Commander.” Newport, RI: Naval War College, Joint Military Operations Paper, May 2001.
- Guthrie, Colonel (USMC) John W. “The Theater Commander: Planning for Conflict Termination.” Carlisle Barracks: U. S. Army War College, 2006.
- Phinney, Catherine. “Enhancing Conflict Termination through Problem Solving.” *Peacekeeping & International Relations* 26 (January–February 1997): 15–17.
- Rotermund, Manfred K. “The Fog of Peace: Finding the End-State of Hostilities.” Carlisle, Barracks: U. S. Army Institute for Strategic Studies, 1999.
- Soucy, Robert R., Kevin A. Shwedo, and John S. Haven II. “War Termination and Joint Planning.” *Joint Force Quarterly* (Summer 1995): 95–101.
- Tuck, Christopher. “Conflict Termination in Iraq.” *RUSI Journal* 149 (October 2004): 17–21.

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STABILITY OPERATIONS (Seminar)

Stability Operations are a core U. S. military mission that the Department of Defense shall be prepared to conduct with proficiency equivalent to combat operations.

—DoD Directive 3000.05
16 September 2009

A. Focus

This session will explore the important concept of stability operations. Recent experiences in both Afghanistan and Iraq, along with U. S. military operations in Somalia, Haiti, Bosnia, and Kosovo in the 1990's have clearly demonstrated that the U. S. military must be prepared to conduct a wide range of operations. Many of these operations are found at the lower end of the spectrum of conflict, yet require just as much, if not more planning, training, and preparation. Department of Defense Directive 3000.05 of 16 September 2009 says that stability operations should be given the same priority as combat operations. Based on the types of missions American forces might encounter in the next decade, stability operations should be an area of study of high importance.

B. Objectives:

- Understand the role of stability operations in the range of military operations and how it fits into the planning for future operations.
- Comprehend the joint phasing model where stability operations must be addressed in all phases.
- Comprehend the role of other U. S. governmental agencies in support of stability operations.
- Understand that planning for stability operations is as important as planning for combat operations.
- Understand the various lines of effort as they pertain to stability operations.

C. Background:

Throughout the history of the U. S. armed forces, the military has engaged in some form of stabilization operation. Due to its role as an expeditionary force in the latter half of the nineteenth and the beginning of the twentieth century, the Marine Corps created the *Small Wars Manual* to help focus military forces on operations in foreign lands before, during, and after conflicts. Following the defeat of Germany and Japan in World War II, the U. S. military achieved great success restoring order to both nations.

The Cold War ushered in the new threat of the Soviet Union and the spread of international communism. Not unreasonably, the U. S. military saw a conflict with the Soviet Union as its greatest threat and prepared for a large scale conventional war. Consequently, with the exception of a portion of the Vietnam War, the American military lost focus on post-war stabilization activities. Peace operations in Somalia, Haiti, Bosnia, and Kosovo after the end of the Cold War helped develop nation-building skills for some military personnel, but were not considered an important or primary mission.

Operations in both Afghanistan and Iraq proved the essential role the U. S. military plays in stability operations. Department of Defense Directive 3000.05, published in November 2005 and then again in September 2009, makes stability and reconstruction operations a core mission for U. S. military forces. The current joint doctrine for stability operations underwent multiple revisions based on lessons from both Iraq and Afghanistan. This joint publication provides the functional lines of operations intended to guide planning and execution and provides the basis for analyzing and planning stability operations. The current joint publication follows closely along the lines of an interagency guideline published by the U. S. Institute of Peace in 2009. The two documents, however, describe the functions of stability operations slightly differently, but are aligned closely enough to ensure a whole of government approach. Although ideas are still evolving, not much new has been written on this topic in the last few years.

There is some fear that the ideas forged with the blood of many Soldiers, Sailors, Airmen, and Marines who died attempting to rebuild Iraq and Afghanistan will again fall into obscurity. The 2014 Quadrennial Defense Review (QDR) stated, “[a]lthough our forces will no longer be sized to conduct large-scale prolonged stability operations, we will preserve the expertise gained during the past ten years of counterinsurgency and stability operations in Iraq and Afghanistan.” There are also some think tanks that state the U. S. military should not be used for rebuilding nations. This familiar tome has come and gone over the years, but the truth remains that throughout history, many generations of the American military, along with other agencies in the U. S. Government, have performed a wide variety of tasks within a stability operations construct. This session will expose students to the current thinking and doctrine on this topic.

The point of contact for this session is Professor George Oliver, C-426.

D. Discussion Topics:

What has history taught us about the role of the military in stability operations?

What does the phrase “establish a safe and secure environment” mean in the context of stability operations? Are there different levels of security and how might lack of security affect other agencies working in the region?

What role does the military have in humanitarian assistance, economic stabilization, rule of law, and governance when transitioning from major combat operations to enable civil authorities? Do varying levels of security have an impact on what the military does in these areas?

How does the military integrate and synchronize its work with other U. S. government agencies?

How does the military integrate its efforts with other organizations, such as the United Nations, regional organizations and non-governmental organizations?

What planning considerations should the commander include in the course of action development for phase IV and phase V?

How would you critique planning for stability operations in Afghanistan?

E. Products:

An in seminar discussion of the assigned case studies below..

F. Required Readings:

Hicks, Kathleen and Eric Ridge. "Planning for Stability Operations: The Use of Capabilities-Based Approaches," Washington, D.C.: Center for Strategic and International Studies, December 2007. Scan Chapter 1, and read chapters 2 and 3. (NWC 6054).

Oliver, George F. "Stability Operations Primer," Newport, RI: U. S. Naval War College 2014. (NWC 3186A).

U. S. Office of the Chairman of the Joint Chiefs of Staff, *Stability Operations*, Joint Publication (JP) 3-07. Washington, D.C.: CJCS, 29 September 2011. Read: Executive Summary, pages xv to xxix and Chapter 2, pages II-1 to II-18, Scan Chapter 3

_____. *Joint Operation Planning*. Joint Publication (JP) 5-0. Washington, D.C.: CJCS, 11 August 2011. Scan pp. III-38 to III-44.

Afghanistan Case Study: Readings assigned by moderator:

Brown, Frances Z. "The U. S. Surge and Afghan Local Governance: Lessons for Transition," Washington, D.C.: U. S. Institute of Peace, Special Report, August 2009. (NWC 6053).

Patterson, Rebecca and Jodi Vittori. "Why Military Officers Should Study Political Economics." *Joint Force Quarterly*, Vol. 75, 4th Quarter (October) 2014. (NWC 6051).

Perito, Robert. "Afghanistan's Police: A Weak Link in Security Sector Reform," Washington, D.C.: U. S. Institute of Peace, Special Report, August 2009. (NWC 6052).

G. Supplementary Readings:

- Binnendijk, Hans, and Patrick Cronin, eds. *Civilian Surge*. Washington, D.C.: National Defense University, 2009.
- Cerami, Joseph R., and Jay W. Boggs, eds. *The Interagency and Counterinsurgency Warfare: Stability, Security, Transition and Reconstruction Roles*. Carlisle, PA: Strategic Studies Institute, 2007.
- Chiarelli, Peter W. and Patrick R. Michaelis. "Winning the Peace: The Requirement for Full-Spectrum Operations." *Military Review* (July–August 2005): 4–17.
- Chiarelli, Peter W. and Peter and Stephen M. Smith. "Learning from Our Modern Wars: The Imperatives of Preparing for a Dangerous Future," *Military Review*, September-October 2007.
- Earle, Caroline R. "Taking Stock: Interagency Integration in Stability Operations," *Prism*, vol 3, no. 2, June 2012.
- Osburg, Jan, Christopher Paul, Lisa Saum-Manning, Dan Madden, Leslie Adrienne Payne. *Assessing Locally Focused Stability Operations*. Santa Monica, CA: Rand Arroyo Center, 2014.
- Ricks, Thomas E. *Fiasco*. New York: Penguin Press, 2006.
- Special Inspector General for Iraq Reconstruction. *Hard Lessons: The Iraq Reconstruction Experience*. Washington, D.C.: U. S. Government printing Office, 2009.
- Szayna, Thomas S, Derek Eaton, James E. Barnett II, Brooke Stearns Lawson, Terrence K. Kelly, Zachary Haldeman. "Integrating Civilian Agencies in Stability Operations." Santa Monica, CA: Rand Arroyo Center, 2009.
- Taw, Jennifer M. *Mission Revolution: The U. S. Military and Stability Operations*, New York: Columbia University Press, 2012.
- Terry, James P. "Stabilization Operations: A Successful Strategy for Post-conflict Management," *Joint Force Quarterly*, issue 58, 3rd Quarter 2010, pages 45-47.
- U. S. Department of the Army. Army Doctrine Publication (ADP 3-07). *Stability*. Washington, D.C.: Headquarters Department of the Army, August 2012.
- U. S. Department of State, *Interagency Conflict Assessment Framework*, Washington, D.C.: Office of the Coordinator for Stabilization and Reconstruction, 2008.

United States Institute of Peace and the United States Army Peacekeeping and Stability Operations Institute, *Guiding Principles for Stabilization and Reconstruction*. Washington, D.C.: U. S. Institute of Peace Press, 2009.

Wright, Donald, and Timothy R. Reese. *On Point II: Transition to the New Campaign: The United State Army in Iraqi Freedom, May 2003 – January 2005*. Leavenworth, KS: Combat Studies Institute, 2008.

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TABLETOP EXERCISE #3
PRC-TAIWAN CASE STUDY (Seminar and Exercise)

I would say that he (Chinese CNO Wu) doesn't want to build a navy that's equivalent to the U. S. He wants to build a navy that surpasses the U. S.

—Admiral Gary Roughead (USN, Ret)
Former U. S. Chief of Naval Operations.

A. Focus:

This tabletop exercise is a six-hour discussion and practical exercise spread over two days that is designed to synthesize the material covered in the trimester thus far. The session will require students to revisit the unique considerations of naval capabilities/limitations and employment considerations relevant to a variety of warfare areas. A review of operational art, maritime warfare theory, and operational law will be required to successfully complete this exercise. The PRC-Taiwan Vignette provides a fictional future scenario for students to apply knowledge and understanding of naval forces employment considerations and maritime command and control in a discussion of the operational design of a major, joint maritime operation. The focus of this session is on the operational design of a major maritime operation. This is not a planning exercise but rather a realistic backdrop to facilitate professional discussion on naval warfare.

B. Objectives:

- Apply knowledge of the naval capabilities, limitations, and employment considerations to operations in a high-intensity combat environment against a near-peer competitor.
- Reinforce knowledge of maritime force capabilities, roles, functions, employment considerations, limitations.
- Design a major naval/joint operation.

C. Background:

Designing a major naval/joint operation resembles in many ways designing a major land operation. However, considerable differences exist because of the characteristics of the physical environment in which maritime forces operate as well as other aspects of the factor of space. Clearly, maritime forces are employed very differently than forces of their terrestrial brethren. In generic terms an operational design for a major naval/joint operation includes the following elements:

ultimate operational (and sometimes limited strategic) and intermediate objectives; force requirements; balancing operational factors against the ultimate objective; identification of critical factors and centers of gravity; initial positions and lines of operations; directions/axes; the operational idea; and operational sustainment.

The operational idea (or scheme) is the very essence of a design for a major naval/joint operation. The operational idea for a campaign should be developed first, because the strategic objective always dominates the operational objectives. It provides a framework for the operational idea of each subordinate major operation. The operational commander should make sure the subordinate operational ideas in each phase of a maritime campaign are consistent with his own operational idea.

The operational idea for a major naval/joint operation is developed during the operational commander's estimate of the situation, and the idea should be further elaborated upon and refined during the planning process. A soundly conceived operational idea should include selected principles of war; a method for defeating the enemy; application of sources of power; the sectors of effort; main forces and supporting forces, the point of main attack (or defense); concentration in the sector of main effort; operational maneuver and fires; protection of the friendly center of gravity; anticipation of the point of culmination; deception; sequencing; synchronization; branches and sequels; phasing; tempo; momentum; and reserve.

It is critical to understand how maritime forces can be used to support and enable success of the other component commander's (land, air, SOF, and so forth) objectives, and ultimately a JTF mission. This fictional vignette is intended to generate discussion of capabilities, limitations, and operational design of a major naval operation. It is not desired that students expend time discussing the viability of the scenario presented, or the probability of American intervention in the portrayed crisis. Students need to simply accept the task of discussing potential operational designs or schemes and how maritime forces could be effectively employed in this situation.

The point of contact for this session is Professor Bill Hartig, C-428.

D. Discussion Topics:

Moderators will guide seminars through discussion. The seminar discussion will be from the point of view of the U. S. Naval Joint Force Maritime Component staff with the following tasks:

Employment considerations given threat, capabilities, environment, and mission.

Command and Control options.

What broad capabilities and options do U. S. Naval forces bring to a Joint Force Commander and how could these be integrated in to joint operations?

What vulnerabilities exist in U. S. forces that could be exploited by the adversary in exercising sea denial operations? How could the JFMCC compensate for those vulnerabilities?

How might the U. S. commander limit threats to his/her forces and vital lines of communication (LOCs) from PRC surface, subsurface, and air threats?

E. Products:

The principal product of this tabletop exercise, exclusive of a professional discourse, are the main elements of operational design (including operational idea) for denying control of the surface / subsurface / air in the Taiwan Strait and its approaches, and obtaining control of the surface / subsurface / air in the South China Sea and the Yellow Sea. Include the integration of offensive / defensive cyber war capabilities in the struggle for sea control / denial, an operational idea for defense / protection of blue shipping in the South China Sea, and an operational idea for attack of Red maritime trade in the Sea areas adjacent to Mainland China. Moderators will issue specific taskings in seminar.

F. Required Readings:

Office of Naval Intelligence. *The People's Liberation Army Navy; A Modern Navy with Chinese Characteristics*. Suitland, MD: Office of Naval Intelligence, August 2009. (NWC 5032). Read: Chapter 3, pp. 16—30.

U. S. Naval War College, Joint Military Operations Department. *PRC-Taiwan Vignette*, 2010. (NWC 4027E). Read.

_____. Joint Military Operations Department. *Reference Guide, Forces/ Capabilities Handbook*. Newport, RI: Naval War College, July 2011. (NWC 3153P). (Issued). Scan.

_____. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. (NWC 2164).

U. S. Navy, U. S. Marine Corps, U. S. Coast Guard. *A Cooperative Strategy for 21st Century Seapower*. Washington, D.C.: Headquarters, U. S. Navy, Marine Corps, and Coast Guard. March 2015. (NWC 2134) Scan: pp. 8-18.

Vego, Milan. "China's Naval Challenge." Proceedings 137, No. 4 (April 2007). (NWC 4121).

G. Supplementary Readings:

Erickson, Andrew, Lyle J. Goldstein, and William S. Murray. “*Chinese Mine Warfare: A PLA Navy ‘Assassin’s Mace’ Capability.*” U. S. Naval War College China Maritime Studies Institute number 3. Newport, RI: Naval War College Press, June 2009. Read pp. 41-53. (NWC 2131).

Navy Warfare Development Command. *Joint Force Maritime Component (C/JFMCC) Planning and Execution*, TACMEMO 3-32-06. Newport, RI: NWDC, November 2006.

Yuan, Jingdong. *Emerging Maritime Rivalry in the South China Sea. Territorial Disputes, Sea-Lane Security, and the Pursuit of Power.* Sydney: International Security Research Programme, University of Sydney, September 2012.

PROBLEM SOLVING AND COMPLEXITY (Seminar)

We are not interested in generals who win victories without bloodshed. The fact that slaughter is a horrifying spectacle must make us take war more seriously, but not provide an excuse for gradually blunting our swords in the name of humanity. Sooner or later someone will come along with a sharp sword and hack off our arms.

—Carl von Clausewitz,
On War, 1832

A. Focus:

This seminar provides you with some of the formalized language of both the science and the doctrine regarding problems and problem solving. The seminar will introduce you to various structural considerations regarding problems as well as present the concept of complexity as it relates to problem solving. It will introduce students to the language of problem solving and set the conditions for a deeper understanding of material to be discussed in the following session, *The Logic of the Commanders Estimate and Decision*.

B. Objectives:

- Understand the relationship between planning and problem solving.
- Recognize the differences in problem structure and the various methodologies available to problem solvers to address them.
- Discuss the language of problem solving.

C. Background:

In the next seminar, *The Logic of the Commanders Estimate and Decision*, we will distinguish between deductive and inductive reasoning in estimating a military situation; and in doctrinal terms, estimating a situation is synonymous with planning. Planning is the vehicle used in the Department of Defense to solve problems. We should think of planning as a learning process, as mental preparation that improves our understanding of a situation. In its simplest terms, planning is thinking before doing. Even if the plan is not executed precisely as envisioned—and few are—the process should result in a deeper situational awareness that improves future decision making. We should thus think of planning as a learning activity that facilitates the exercise of judgment and not as merely a mechanical procedure.

The very first step in estimating a situation is to understand the environment in which the problem exists. In the past, this fell squarely into the J-2 Intelligence Directorates cone of

fire. We are all familiar, or should be, with the Joint Intelligence Preparation of the Operating Environment (JIPOE) which provides commanders and planners information on the environment and the enemy. Unfortunately, the problems we will face as modern day officers manifest themselves—almost universally—as complicated problems. They are complex and they are often actually complex adaptive systems (CAS). To begin to understand this type of problem, an ill-structured problem that manifests itself as a CAS, we need far more than the Intelligence Directorate can provide.

As military professionals, we often seek a scientific understanding of war. This approach is appealing because the human mind tends to organize its perceptions according to familiar analogies and metaphors, like the powerful images of traditional Newtonian physics. Our military doctrine abounds with terms like leverage, center of gravity, and mass. Similarly, as you discovered in your studies in the Theater Security Decision Making Department, many political scientists treat political entities as "unitary rational actors," the social equivalents of Newton's solid bodies hurtling through space.

Real political units, however, are not unitary. Rather, they are collections of intertwined but fundamentally distinct actors and systems. Their behavior derives from the internal interplay of both rational and irrational forces, as well as from the peculiarities of their own histories and of sheer chance. Planners who accept the unitary rational actor model as a description of entities at war will never understand either side's motivations or actual behavior. Such planners ignore their own side's greatest potential vulnerabilities and deny themselves potential levers and targets—the fault-lines that exist within any human political construct. In fact, treating an enemy entity as a unitary actor tends to be a self-fulfilling and counterproductive prophecy, reinforcing a sense of unity among disparate elements which might otherwise be pried apart. Fortunately, the physical sciences, as well as Department of Defense planners, have begun to embrace the class of problems posed by social interactions like human politics and war. Therefore, "hard-science" metaphors for war and politics can still be useful. The appropriate imagery, however, is not that of Newtonian physics. Rather, we need to think of planning in terms of biology, and particularly ecology.

To survive over time, the various participants in any ecosystem must adapt—not only to the "external" environment but to each other. These agents compete or cooperate, consuming and being consumed, joining and dividing, and so on. In fact, from the standpoint of any individual agent, the behavior of the other agents is itself a major element of the environment. The collective behavior of the various agents can even change the nature of the "external" environment. For example, certain species, left unchecked, can turn a well-vegetated area into a desert. Our opponent, or threat, coupled with the 'ecology' in which we operate, requires planners who are intelligent, agile, and well-versed in operational art.

Earlier we spoke of the complex adaptive system. What exactly is that? A complex adaptive system (CAS) is characterized by four main points; they are first, and obviously, complex. Students are well advised to consider complexity as opposed to complicated. Complicated systems, such as an internal combustion engine, are well mapped and consist of a subsystem of parts. If we remove a part, the system will not work. A complex system, however, adapts. If we remove a 'part,' the system discovers a work-around and modifies itself. That brings us to the second point of a CAS, it is adaptable. It learns from its environment and adjusts. The CAS, in addition to being adaptable and complex, is also interconnected. Subsystems relate to each other and the actions of one may affect many.

Last, a CAS manifests diversity. There is diversity in the system in the number of stakeholders as well as positions, opinions, objectives, and so forth. The subject of complexity as it relates to military problems will be discussed in this seminar and referred to in future sessions.

Much like the example above, military operations in the twenty-first century are exceedingly complex and generally address ill-structured problems. An ill-structured problem has no stopping rules, multiple and conflicting feedback loops, and is not suited well to algorithmic processes. A system created by such a multiplicity of internal feedback loops, by definition, is a complex adaptive system. Such systems nest one inside the other, constructing, interpenetrating, and disrupting one another across illusory "system boundaries." It is in this volatile, uncertain, complex, and ambiguous environment that you, as professional problem solvers, must plan and operate.

You will come to appreciate the similarities between the various processes and discover that military planning is highly nonlinear and requires a deep appreciation of operational art, organization, human dynamics, and further requires a nuanced leadership approach in order to reach a common and acceptable solution.

The point of contact for this session is Professor Bill Hartig, C-428.

D. Questions:

How does a problem's structure relate to the methodology to resolve it?

Why do (or should) we first assess the structure and typology of a problem before we begin trying to resolve it?

If many of the problems we confront in the modern operating environment manifest themselves as Complex Adaptive Systems, how can they be adequately described?

E. Products:

None.

F. Required Readings:

Hartig, William J. U. S. Naval War College. Joint Military Operations Department. "Problem Solving and the Military Professional." Newport, RI: Naval War College, 2010. (NWC 1029).

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G. Supplementary Readings:

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- Rittel, Horst, and Melvin M. Webber. "Dilemmas in a General Theory of Planning." *Policy Sciences* 4 (1973): 155–69.
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Simon, Herbert A. "The Executive as Decision Maker" and "Organizational Design: Man-Machine Systems for Decision Making." In Herbert A. Simon, *The New Science of Management Decision*. New York: Harper and Row, 1960.

_____. "The Architecture of Complexity." *Proceedings of the American Philosophical Society* 106 (1962): 467–82.

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_____. *The Sciences of the Artificial*, 3d ed. Cambridge, MA: The MIT Press, 1996.

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THE LOGIC OF THE COMMANDER'S ESTIMATE AND DECISION (Seminar)

Before undertaking a task the commander makes an estimate of the situation and formulates a plan of action. The estimate follows in general the accepted form. In scope and thoroughness it is commensurate with the size and importance of the task and the time available.

—Navy Department, *War Instructions*
Paragraph 217, 1944

A. Focus:

The focus of this session is on explaining and analyzing the mental processes and the role of the commander/staff in the estimate of the situation and in making sound military decisions.

B. Objectives:

- Know the historical roots of the commander's estimate of the situation and understand the logical reasoning applied in the process of estimating the situation.
- Understand the relationship between process and the format of the estimate of the situation
- Comprehend the role and importance of the commander in the estimate of the situation

C. Background:

One of the principal responsibilities of commanders at any level of command is to make decisions for the employment of their forces in combat. Various automated decision aids can never replace the commander's experience, judgment, and wisdom in making a sound decision. Some of the most successful military commanders have and still use a mental process of *estimating the situation* before making a decision.

The first systematic estimate of the situation was used by the Prussian army in 1850. The Prussian / German Chief of General Staff, General (later Field Marshal) Helmuth von Moltke, Sr., used what the Germans call *Lagebeurteilung*, or the "assessment of the situation"—a mental process of reasoning in order to reach a sound decision. Other armies in Europe gradually introduced the Prussian method of conducting the estimate of the situation. In the United States, the Army's Infantry School at Fort Leavenworth, Kansas adopted the Prussian model in 1909 when Captain Roger S. Fitch published his *Estimating Tactical Situations and Publishing Field Orders*. One year later, the U. S. Army officially adopted Fitch's document as its standard training manual. In 1911, the President of the U. S. Naval

War College, Admiral Raymond P. Rodgers (1849-1925) adopted the "applicability system" or "estimate of the situation" as the method in teaching students on how to make sound military decisions. Afterward, the estimate of the situation became one of the key subjects taught and applied in the Naval War College's curriculum. The Navy's standard manual for estimating the situation, *Sound Military Decision* published by the Naval War College in 1936 during tenure of Rear Admiral E. C. Kalbfus (1877-1954) as the President. Afterward, it was revised several times and extensively used by the U. S. Navy.

The estimate of the situation is the very foundation of any sound decision-making process, whether it be personal life, business, or in military affairs. In making a decision, one must collect all the facts and then determine what options are open and what might stand in the way of these options. Each option is then weighed against possible obstacles and in terms of their advantages and disadvantages. The estimate process should end with a sound decision. In military terms, the commander's estimate of the situation is understood as a logical process of reasoning by which a commander considers all the factors affecting a military situation to determine a course of action to accomplish a given mission. The estimate is a reasoned solution to a problem in which each step in the process incrementally leads to a decision that, without these steps, could be arrived at only by accident. The purpose of the estimate of the situation is not to justify a decision previously arrived at but to develop a reasoned, well informed approach to solving a military problem.

In general, any estimate process consists of (1) a general part and (2) a reasoning process. The general part consists, of a general appreciation of the existing situation; formulating the end to be attained with a view of localizing the problem, and comparison of basic data. The *reasoning process* is used to arrive at a selection of the method for attaining the desired end. Before one starts to reason, one must possess knowledge of the situation, recognize what is to be accomplished, and examine the factual elements at one's disposal. After the problem is localized (the mission) the next step is to use reasoning to make conclusions and then convert conclusions into a plan of action (the decision).

Reasoning can be defined as the action of thinking about something in a logical, sensible way, or simply the process of exercising the faculty of reason. It starts with the input (premises) and produces output (conclusions). In each specific case of surmising a conclusion, inferences are made on the basis of various bits of available information. *Logical reasoning* is the very foundation of a sound estimate of the situation.

Reasoning can be inductive or deductive. *Inductive reasoning* is used to discover general laws from particular facts. In inductive reasoning, the conclusion is reached by generalizing or extrapolating from initial information. In contrast, *deductive reasoning* proceeds to discover particular truths from general truths. It links premises with conclusions. If all premises are true, the terms are clear, and the rules of deductive logic are followed, the conclusion reached is necessarily true. It is essentially an analytical process, while inductive reasoning is a synthetic process. In inductive reasoning if arguments are sound, the conclusions are merely supported by the premises while in deductive reasoning if the arguments are sound then the conclusion is guaranteed. Deductive reasoning is predominantly applied in the estimate of the situation process. In some cases, however, inductive reasoning might be applicable.

Reflective thinking is used in a general appreciation of the initial situation in the estimate process. It refers to the process of analyzing and making judgments about what has

happened. It cannot be successful without critical *thinking*. A critical thinker collects information, evaluates, draws conclusion using logic and assesses logical conclusions. In contrast, a non-critical thinker collects information and then draws conclusions without logic. Critical thinking and reflective thinking are often used synonymously.

In general, a situation pertains to a state of affairs or combination of circumstances at a certain moment. In military terms, a situation can also be described as the entirety of conditions that exist in a certain area and certain time and affect the conduct of one's military action. Political, diplomatic, military, economic, demographic, informational, ethnic, religious, environmental, and other situations exist at the same time. In general, the scale of the military objective to be accomplished determines the scope of the military situation that must be evaluated. Hence, tactical, operational, and strategic (national-strategic and military or theater-strategic) situations can be differentiated. The larger the objective, the more complex the situation in terms of space, time, and force. The military situation is characterized through the status and actions of opposing forces; terrain; state of weather, and time of day and year; and other conditions. A military situation can consist, in turn, of ground, air (space), and naval situations, respectively.

Estimating the situation means analyzing the causality of all its elements and their influence on the accomplishment of one's mission. For that purpose, the operational commander should divide the situation into its constituent parts and determine how each part affects the employment of both the enemy and friendly forces, and, in some cases, neutrals as well. The commander must also determine how to make maximum use of favorable factors in the situation for the employment of friendly forces while at the same time accounting for those elements that can potentially preclude or weaken one's combat actions.

The commander's estimate of the situation should be a thorough and methodical process of reasoning. Great care should be taken that no relevant factors are omitted or, worse, willfully ignored in the analysis. Hasty and superficial considerations should be avoided. The process in itself will not necessarily result in the best decision, or even a sound decision. The commanders and their staffs should bear in mind that there are several methods for conducting the estimate as a whole and its individual steps. They should know the advantages and disadvantages of each method and then apply the one best suited to the mission and the situation and the commander's personal preferences and experience.

A standardized format for conducting an estimate of the situation is highly useful in ensuring that a certain logical process of reasoning is applied in conducting the estimate of the situation. However, the format is merely an arrangement by means of which the commander's thoughts may be developed in a logical order. The estimate's format should be based on logic and common sense. It contributes to the commander's decision only to the extent that it provides a solid framework for systematic analysis and reasoning. Yet the soundness of the estimate ultimately rests on the commander's earnest thought, mental ability, character, and experience. Rigidly applying the estimate's format would invariably lead to a faulty application of the process. It may well result in a decision that is not sound. Clarity of thinking also suffers when more time and effort are spent on formalities than on the essence of the estimate.

The principal elements of the commander's estimate of the situation are as follows: (1) the mission; (2) initial situation; (3) enemy courses of action; (4) friendly courses of action; and (5) the decision. There is no commonly agreed method of conducting the estimate

of the situation. In generic terms, the commander's estimate encompasses the following steps: mission analysis, estimate of the physical/human environment, the enemy situation and the friendly situation (and in some cases the situation of the neutrals), analysis of the opposing courses of action, comparison of friendly courses of action, and the decision. Steps in the estimate can be expanded or condensed according to the nature of a given problem.

The commander cannot conduct a proper estimate of the situation and make a sound decision without accurate, timely, and relevant information. Clearly, the most important basis for making decisions is information on the enemy and friendly subordinate forces. In general, the clearer the given picture, the better uncertainties will be mastered, and the more accurate the estimate and the sounder the decision will be. The focus should at all times be on the facts of the situation. In transmitting their reports to the higher commander, subordinate commanders are duty-bound to tell the absolute truth as they see it. Embellishment and exaggeration must be avoided. In forwarding reports to the higher commander, subordinate commanders must always be clear about what their subordinates actually did observe, what others observed, and what only speculation is. All subordinate commanders should report on the situation to higher commanders as quickly and as fully as possible and pass on all important information.

In conducting the estimate of the situation, the commander should focus his mental efforts on the most important things. The facts of the situation should be clearly differentiated from assumptions or speculation. All the facts should have a proof. The commander should remain calm, should think quickly but should not act in haste, and should rethink through the situation and make the decision independently while receiving reports from his subordinates. The commander should express the decision in short, clear sentences.

The more the commander practices conducting the estimate of the situation, the more likely the commander is to make sound decisions. One of the main prerequisites for making a sound decision is a full understanding of the theoretical underpinnings of the estimate as a whole and its principal elements. If the process is properly applied, the estimate of the situation should ensure that the commander and his staff do not leave out any factor of importance that has a bearing on the decision. At the same time, no amount of education or training will ensure that the commander makes a sound decision unless it is coupled with sound judgment and wisdom based on practical experience.

The point of contact for this session is Professor Bill Hartig, C-428.

D. Discussion Topics:

Discuss the historical roots of the commander's estimate of the situation.

How is reflective reasoning used in conducting an estimate of the situation? Describe advantages and disadvantages of deductive and inductive reasoning.

What is the relationship between the mental process and the format of the estimate of the situation? What are advantages and disadvantages of each?

What is the role of information and reports in conducting an estimate of the situation?

Explain and discuss the role and importance of the commanders and their staffs in the estimate of the situation. What is the role of automated decision aids in the estimate process?

E. Products:

None.

F. Required Reading:

Burwell, David, W. *Logical Evolution of the Military Decision Making Process*. Fort Leavenworth, KS: School of Advanced Military Studies, United States Army Command and General Staff College, 2001. **(NWC 1203)**.

U. S. Naval War College. "Sound Military Decision." U. S. Naval War College. Newport, RI: Naval War College Press, 1942. Read: Part One, Chapter I, *Command and its Problems* and Chapter II, *Mental Processes and Human Tendencies*. **(NWC 6047)**.

U. S. Navy. *Navy Planning*. Navy Warfare Publication (NWP) 5-01. Washington, D.C.: Department of the Navy, December, 2013. Read Annex F-6, Commander's Estimate **(Issued)**.

G. Supplementary Readings:

Cowan, Thomas H. *A Single Flexible, Rigorous Decision Making Process*. Fort Leavenworth, KS: School of Advanced Military Studies, United States Army Command and General Staff College, 1996.

Fitch, Roger S., *Estimating Tactical Situations and Composing Field Orders* Fort Leavenworth, KS: U. S. Infantry and Cavalry School, 1909.

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ADAPTIVE PLANNING AND EXECUTION SYSTEM (APEX) (Seminar)

*In preparing for battle I have always found that plans are useless, but
planning is indispensable.*

—General Dwight D. Eisenhower, USA

A. Focus:

This session introduces the Adaptive Planning and Execution System (APEX), which is designed, in part, to ‘bridge the gap’ between deliberate and crisis action planning to provide the nation’s strategic leadership with a more responsive planning process, both in preparation time and option flexibility. The session begins with an overview of the Joint Strategic Planning System (JSPS) and the roles of the Secretary of Defense, the Chairman of the Joint Chiefs of Staff (CJCS), and the service chiefs in translating national policy objectives into definitive planning guidance. Currently, planning guidance for combatant commanders and their staffs can be found in the Guidance for the Employment of the Force (GEF) and the Joint Strategic Capabilities Plan (JSCP). Planning guidance to the services may also be found in the document *Sustaining U. S. Global Leadership Priorities for 21st Century Defense*.

B. Objectives:

- Comprehend the purpose of the JSPS.
- Comprehend how the GEF, JSCP, and Global Force Management Implementation Guidance (GFMIG) drive the planning cycle and frame planning requirements for the combatant commander.
- Understand how APEX ‘bridges the gap’ between deliberate and crisis action planning.

C. Background

Mandated by Title 10 USC, the Secretary of Defense and the CJCS are pivotal in translating national security objectives into definitive planning guidance for the combatant commanders and the joint force. The combatant commanders are responsible for the actual development of the GEF and JSCP directed campaign plans, but are dependent on support from the services, other combatant commanders, and the combat support agencies during the planning and execution process.

APEX is the system used by the CCDR’s to produce theses directed contingency, or deliberate, plans. It is a set of ideas unifying efforts across people, processes, products, and technology. It is designed to speed up the deliberate planning process—to make deliberate

plans more relevant, more usable. APEX provides for increased flexibility at the Theater Strategic and Operational levels and enables shared understanding of problems, threats, and options. APEX requires In-Progress Reviews (IPR's) for directed contingency plans, increased civil-military dialogue, campaign, posture, and interagency planning, resource-informed planning and assessment, Global Force Management, and trained military planners to facilitate rapid plan development.

The point of contact for this session is Professor Michael McGauvran, C-414.

D. Discussion Topics:

What is the value of the enormous effort we expend on deliberate planning?

What do the GEF, JSCP, and GFMIG provide planners?

Adaptive Planning is designed to 'preserve the best characteristics of contingency planning and crisis action planning with a common process'. How does APEX meet this challenge?

E. Product:

None.

F. Required Readings:

McGauvran, Michael. U. S. Naval War College. Joint Military Operations Department. "A Primer for: The Joint Strategic Planning System (JSPS), Guidance for Employment of the Force (GEF), Joint Strategic Capabilities Plan (JSCP), the Adaptive Planning and Execution (APEX) System, and Global Force Management (GFM)." Naval War College: Newport, RI. 30 December 2015. **(NWC 2061F)**.

U. S. Office of the Chairman of the Joint Chiefs of Staff. *Joint Operation Planning*. Joint Publication (JP) 5-0. Washington, D.C.: CJCS, 11 August 2011. Read Chapter I pp. I-1 thru I-7, Chap II pp. II-1 thru II-39, and Appendix H on Global Force Management. **(Issued)**.

U. S. Office of the Secretary of Defense. Sustaining U. S. Global Leadership Priorities for 21st Century Defense. Washington, D.C.: GPO, 5 January 2012. Scan. **(NWC 2111)**.

G. Supplementary Readings:

U. S. Office of the Chairman of the Joint Chiefs of Staff. CJCSM 3130.03. *Adaptive Planning and Execution (APEX) Planning Formats and Guidance*. 18 October 2102.

ORDERS AND ORDER DEVELOPMENT (Seminar)

To plan well is to demonstrate imagination and not merely to apply mechanical procedures. Done well, planning is an extremely valuable activity that greatly improves performance and is an effective use of time. Done poorly, it can be worse than irrelevant and a waste of valuable time. The fundamental challenge of planning is to reconcile the tension between the desire for preparation and the need for flexibility in recognition of the uncertainty of war.

—Marine Corps Doctrinal Publication 5, *Planning*, 1997

A. Focus:

Planning is problem solving and orders development is the mechanism used to convey the planning groups intellectual labor to subordinate commands for execution. Orders development and orders writing is a common task that all commanders and staff officers should understand.

B. Objectives:

- Understand the Orders Development Process, the contents of an Operations Plan / Order, and the standard format used for Operations Plans / Orders.
- Understand the importance of orders reconciliation / crosswalk prior to issuing the order.
- Gain an understanding of the issues for consideration, inputs, and outputs of the Orders Development Process sufficient to produce a basic Operations Order.

C. Background:

As Spruance Course graduates, you will likely participate in the orders development process, perhaps tasked with writing a staff estimate, base plan, or a specified annex to an operations plan or order. To meet this task, you must be able to read a higher headquarters order, develop a supporting order, and communicate that order clearly to subordinate units in a timely manner.

In the very near future we will conduct a series of practical planning exercises that conclude with orders briefs. You will use this seminar and associated reference readings to develop portions of operations orders to communicate the commander's intent, guidance, and decisions that are products from the planning process. Orders development communicates the commander's intent, guidance, and decisions in a clear, useful form understandable by those executing the order. The operations order is the means of transmitting this key and pertinent information concerning execution to all units in or attached to the issuing headquarters. The

order should only contain critical or new information—not routine matters normally found in Standard Operating Procedures (SOPs). The Chief of Staff (CoS), the J-5 (Plans) or the J-3 (Operations) Officer, as appropriate, is normally responsible for orders development. Orders development also includes an essential two-step quality control approach during the writing phase of the order or plan. *Reconciliation* is an internal review that the staff conducts of the entire order. It identifies gaps and discrepancies in the order. Specifically, the staff compares the Commander's Intent, the mission, and Commanders Critical Information Requirements (CCIR(s)) against the concept of operations and supporting concepts. The *Crosswalk* is an external review of higher and adjacent orders to ensure unity of effort and to ensure the Higher Headquarters (HHQ) Commander's Intent is met.

The point of contact for this session is Professor Bill Hartig, C-428.

D. Discussion Topics:

How does the operational design generated as a result of the planning process become codified for action?

Do we use deductive or inductive reasoning in developing an operations order? Explain your answer.

Describe the difference between an operations order and a Commanders Estimate.

E. Products:

None.

F. Required Readings:

Depuy, William E., "Concepts of Operation: the Heart of Command, the Tool of Doctrine," Army 38, no. 8 (August 1988): 26-40. (NWC 4114).

U. S. Department of the Navy. *Navy Planning*. Naval Warfare Publication (NWP) 5-01. Norfolk, VA: Department of the Navy, December 2013. Read pp. 6-1 to 6-9, and Annex L-2. (Issued).

_____. *Universal Naval Task List (UNTL)*. OPNAVINST 3500.38B. Norfolk, VA: Department of the Navy, 30 January 2007. Scan.

_____. *Universal Joint Task Manual (UJTM)*. CJCSM 3500.04F. Washington, D.C.: CJCS, 1 June 2011. Scan.

_____. *Universal Joint Tasks*, Washington. D.C.: CJCS, 1 November 2015.
http://www.dtic.mil/doctrine/training/ujtl_tasks.pdf. Scan.

G. Supplementary Readings:

_____. *Joint Operation Planning*. Joint Publication (JP) 5-0. Washington, D.C.: CJCS, 11 August 2011.

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TABLETOP EXERCISE #4: AN ANALYSIS OF VADM KINKAID'S OPERATIONS ORDER—LEYTE ASSAULT (Exercise)

There is a distinction between ability as a leader of men and ability as a strategist or tactician. The commander may be a great leader, a natural leader, and fail through lack of knowledge. Leadership is the art of inspiring, guiding, and directing bodies of men so that they ardently desire to do what the leader wishes. But the wishes of the leader will not bring victory unless as a commander he has the strategic knowledge and the tactical skill to make a good plan.

—Navy Department, *War Instructions*,
Paragraph 108, 1944

A. Focus:

During our studies of Joint Operational Warfare, Operation KING II, of the MUSKETEER Campaign Plan, provided the backdrop against which we studied the theory of warfare. In the previous session, *Orders and Orders Writing*, you were exposed to the Department of Defense processes and formats for orders. More importantly, you now understand that orders translate the critical and creative thought of a commander and his staff into products that direct actions of both subordinate elements and operational functions in time and space.

This exercise builds on previous sessions and seeks to foster creative thought through the analysis and evaluation of Vice Admiral Kinkaid's Operation Plan 12-44 for Operation KING II (Leyte Assault). You will have the opportunity to review VADM Kinkaid's OPORD through the lens of Operational Art to gain a better understanding and appreciation of one of the Commander's principal tools used to direct operations.

B. Objectives:

- Analyze VADM Kinkaid's Operation Order for Operation KING II through the lens of Operational Art.
- Understand how Operational Art, in particular Commander's Intent, Operational Idea, and Operational Design, are captured and articulated in the five-paragraph OPORD.

C. Background:

As you saw in the previous session, the five-paragraph OPORD is a directive issued to subordinate commanders to coordinate and execute a specific operation(s). In short, the OPORD is the physical product of a staff or planning group's effort and serves as a vehicle to

direct the execution of an operation(s) in accordance with the commander's intent. Effective orders will clearly articulate the commander's vision and intent, the commander's operational idea, and the associated operational design. They should:

- Clearly convey the commander's intent and purpose.
- Be authoritative, simple, brief, clear, complete and timely.
- Allow subordinates flexibility in execution.
- Contain critical facts and necessary assumptions.
- Be positive and authoritative in expression
- Use doctrinal language and avoid meaningless or vague expressions.

Vice-Admiral Kinkaid's operation order in support of the Leyte Operation was one of many operations orders written during the Second World War; it was the cumulative result of past experience and lessons learned. It is similar—but not identical—to the formats found in APEX, NWP 5.01, and any of the other services' planning documents. It has, therefore, stood the test of both time and combat.

The point of contact for this session is Lieutenant Colonel Anthony New, USA, C-411.

D. Discussion Topics:

Explain VADM Kinkaid's Commander's intent. Does it effectively communicate his "personal vision of victory and the conditions and methods for obtaining it"? What would you change and why?

How well does VADM Kinkaid's Operational Idea (Vego) or Operational Approach (Joint Doctrine) describe the broad actions the force must take to achieve the military end state?

Does the Operations order communicate command support relationships between VADM Kinkaid's forces and the Landing Force (6th Army)?

Identify and describe other elements of Operational Art found in VADM Kinkaid's OPORD.

Identify any additional gaps or weaknesses in the OPORD. How would you improve it?

E. Products:

A critical analysis of the operations order that was developed by VADM Kinkaid and staff in support of Operation KING II.

F. Required Reading:

Commander, Allied Naval Forces Southwest Pacific Area (and Seventh Fleet). Operation Plan 12-44, Serial 00019-A, dated 25 September 1944: KING TWO. (NWC 6046).

U. S. Department of the Navy. *Navy Planning*. Naval Warfare Publication (NWP) 5-01. Norfolk, VA: Department of the Navy, December 2013. Review pp. 6-1 through 6-9 and Appendix L-1 thru L-3-19). (**Issued**).

G. Supplementary Readings:

Depuy, William E., “Concepts of Operation: the Heart of Command, the Tool of Doctrine,” *Army* 38, no.8. (August 1988).

U. S. Army. *The Operations Process*. Army Doctrine Publication (ADP) 5. Washington, D.C.: Headquarters, Department of the Army, May 2012.

U. S. Marine Corps. *Marine Corps Planning Process*. Marine Corps Warfighting Publication (MCWP) 5-1. Washington, D.C.: U. S. Marine Corps, 2010.

U. S. Office of the Chairman, Joint Chiefs of Staff. *Adaptive Planning and Execution (APEX) Planning Formats and Guidance*, CJCSM 3130.03. Washington, D.C.: 18 October 2012.

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INTRODUCTION TO THE NAVY PLANNING PROCESS (Seminar)

Planning is everything – Plans are nothing.

—Field Marshall Helmuth Graf von Moltke,
1880-1891

A. Focus:

This session introduces students to the Navy Planning Process (NPP). Students will become familiar with the navy planning process as described in NWP 5-01, *Navy Planning*. In later sessions, students will apply the NPP, and critical and creative thought, to a fictional scenario and develop selected portions of an operations order.

B. Objectives:

- Understand the Navy Planning Process, its linkage to Operational Art and problem solving, and orders development.
- Comprehend the similarities between the NPP and the Joint Operational Planning process.
- Understand the purpose and process of mission analysis, COA development, COA analysis (war gaming), COA decision and orders development.

C. Background:

The Navy Planning Process (NPP), as described in NWP 5-01, *Navy Planning*, is a means to assist naval commanders and their staffs in analyzing problems and developing an operational idea, design, and orders. The modern day Navy Planning Process is a maturation of the Commanders Estimate of the Situation developed during the interlude between the World Wars and used in WWII by the Navy. While the NPP considers information often unique to the maritime environment, Navy planning procedures are very similar to those used by the other services. Additionally while concentrating primarily at the tactical and low-operational levels of war, the NPP also conforms to joint planning doctrine, which most often is used at the operational and theater-strategic levels of war. The tenets of operational art are the foundation of all of planning processes and are crucial to any operation's success. In the previous seminar, *Analysis of VADM Kinkaid's Operations Order*, we discovered the vehicle by which a commander's operational design is transmitted to those tasked with execution of the tasks contained therein.

The NPP consists of six discrete steps: mission analysis, course of action development, course of action analysis (war gaming), course of action comparison and decision, plans and orders development, and transition. Understanding the details of the NPP is necessary first step for in the very near future; we will utilize the process to develop an operations order to resolve a military problem based on a fictional scenario in and around the island of Borneo.

The point of contact for this session is Commander Dan Caldwell, USN, C-414.

D. Discussion Topics:

How is Operational Art captured in the Navy Planning Process?

The NPP is often portrayed as a rigid, serial, step by step process. Is it? Justify your response.

Where does the NPP and JOPP differ significantly? Can the NPP be used in Joint Operations?

E. Product:

None

F. Required Reading:

U. S. Department of the Navy. *Navy Planning*. Naval Warfare Publication (NWP) 5-01. Norfolk, VA: Department of the Navy, December 2013. Read 1-1 thru 5-6. **(Issued)**.

U. S. Naval War College. "Sound Military Decision." U. S. Naval War College. Newport, RI: Naval War College Press, 1942. Review Part One, Chapter 1, *Command and its Problems* and Chapter II, *Mental Processes and Human Tendencies*. Read Part One Chapter V, *The Four Steps in the Solution of a Military Problem*. **(NWC 6047)**.

U. S. Office of the Chairman of the Joint Chiefs of Staff. Joint Publication 5-0: *Joint Operation Planning*. Government Printing Office: Washington, D.C.: 11 August 2011. Review pp. IV-1 to IV-44.

G. Supplementary Reading:

Department of the Air Force. Annex 3-0: *Operations and Planning*. McClelland AFB, AL: Curtis Lemay Center for Doctrine Development and Education: 14 October 2011.

U. S. Army. Army Doctrinal Publication (ADP) 5. *The Operations Process*. Washington, D.C.: Headquarters, Department of the Army. 17 May 2012.

U. S. Marine Corps. Marine Corps Warfighting Publication (MCWP) 5-01. *Marine Corps Planning Process*. Washington, D.C.: Headquarters, United States Marine Corps. 2010.

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THE STRUGGLE FOR SEA CONTROL (Exercise)

He who commands the sea is at great liberty and may take as much or as little of the war as he will.

— Francis Bacon, 1561-1626

A. Focus:

This session presents students the opportunity to apply the Navy Planning Process (NPP) using a fictional crisis scenario in and around the island of Borneo. Students, as Joint Force Maritime Component Commander staff members, will develop an Operations Order (OPORD) that establishes local and temporal sea control and sets conditions for a forcible entry operation onto the island of Borneo.

B. Objectives:

- Employ the Navy Planning Process in resolving an ill-structured problem.
- Gain an understanding and appreciation of the planning considerations associated with the employment of a naval force in an Anti-Access / Area Demined (A2/AD) environment.
- Employ the concepts and principles of maritime command and control.
- Create an Operations Order that captures the operational design developed by the Planning Group.

C. Background:

Gaining a conceptual understanding of the Navy Planning Process, accomplished in *The Introduction to the Navy Planning Process* earlier, is the first step in becoming a maritime planner. During this exercise, students will expand their understanding of the NPP through practical application. You will be assigned to a JFMCC staff Operations Planning Group (OPG) and conduct the NPP following the receipt of a Warning Order (WARNORD). More specifically, your OPG will leverage their understanding of the NPP, operational art, naval warfare theory, and operational leadership and thinking to create an OPORD that captures the Commander's operational idea/design.

The point of contact for this session is Commander Dan Caldwell, USN, C-414.

D. Discussion Topics:

None.

E. Products:

Students will, through a moderator led application of the NPP, develop an operational design for gaining, maintaining, and exploiting sea control in an A2/AD environment in order to project U. S. joint power onto the island of Borneo. The end product is an OPORD (with Annexes A, (Task Organization) B (Intelligence), C (Operations), and J (Command and Control)).

F. Required Reading:

Specific reading guidance will be assigned by moderators.

U. S. Naval War College. *A Borneo Case Study for Expeditionary Warfare*. Newport, RI: Naval War College, April, 2015. **(NWC 6036H). (Issued).**

_____. Joint Military Operations Department. *Forces/Capabilities Handbook*. Newport, RI: Naval War College, 2014. Scan. **(NWC 3153P). (Issued).**

_____. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. **(NWC 2164).**

U. S. Navy. Office of the Chief of Naval Operations. *Navy Planning*. Naval Warfare Publication (NWP) 5-01. Norfolk, VA: Department of the Navy, December 2013. Scan. **(Issued).**

G. Supplementary Reading:

Department of the Air Force. Annex 3-0: *Operations and Planning*. McClelland AFB, AL: Curtis Lemay Center for Doctrine Development and Education, October 14, 2011.

U. S. Army. Army Doctrinal Publication (ADP) 5. *The Operations Process*. Washington, D.C.: Headquarters, Department of the Army, May 17, 2012.

U. S. Chairman of the Joint Chiefs of Staff. Joint Publication (JP) 5-0: *Joint Operation Planning*. Government Printing Office: Washington, D.C., August 11, 2011.

U. S. Marine Corps. Marine Corps Warfighting Publication (MCWP) 5-01. *Marine Corps Planning Process*. Washington, D.C.: Headquarters, United States Marine Corps, 2010.

TABLETOP EXERCISE #5: CRITIQUING THE OPERATIONS ORDER (Exercise)

My mental faculties remained in suspended animation while I obeyed the orders of higher ups. This is typical with everyone in the military.

—MajGen Smedley Butler USMC, 1933

A. Focus:

The purpose of an operations order is to translate the commander's decision into oral, written, and/or graphic communication sufficient to guide implementation and promote initiative by subordinates. The operations order, once completed, becomes the principal means by which the commander expresses his or her decision, intent, and guidance. It is the physical product of our intellects and our processes for understanding problems and coming up with creative and innovative ways of resolving them. Previously, you analyzed and critiqued the operations order that VADM Kinkaid's staff developed for the seizure of Leyte. During this session, you will again demonstrate critical thought by a through a critique of another seminar's operations order.

B. Objectives:

- Analyze a commander's operational idea, the articulation of decisions, and how a commander directs military operations through written operations orders.
- Apply the order development process which includes preparation of the base order and annexes, reconciliation, and crosswalks to the evaluation of another seminar's operations order.

C. Background:

Commanders are the most important participants in the planning process, with the staff performing essential functions that amplify the effectiveness of operations. One of the most important tasks of the staff is to clearly articulate the commander's operational idea/design to subordinates in the form of an order. The development of the order begins during mission analysis and continues throughout the planning process. The orders development step; however, is the formal part of the process that communicates the plan to subordinate units for execution. It is important to understand that operations orders are not meant for those who write them but for those who receive and execute them. As such, operations orders should be as clear, simple, and as concise as each situation permits.

This session provides yet another opportunity for critical thought. You will analyze another seminar's operations order to gain a better understanding of how an operations order

communicates a commander's operational idea/design to subordinates—and brief your fellow seminar on your conclusions. The other seminar will do the same for your seminar. At the conclusion of this seminar, students will be able to identify positive practices and pitfalls in orders writing to improve future orders development and will have selected an order for execution.

The point of contact for this session is LtCol J. P. Brown, USMC, C-403.

D. Discussion Topics:

Is the operations order clear and does it use simple, understandable English and proper military (doctrinal) terminology?

Is the operations order concise and complete, stating all major tasks to subordinates clearly to include the task's purpose?

Is the affirmative form of expression used throughout to reinforce the authoritativeness of the operations order?

Is the plan simple, eliminating all reasonable possibilities for misunderstanding?

Is the plan flexible? Does the operations order instruct only as far as conditions can be reasonably foreseen?

Based on our understanding of mission command, evaluate the order from the perspective of the ones tasked to execute it. Does it allow for initiative?

How well does the operations order express the commander's intent behind the ordered actions to ensure the intelligent cooperation and initiative of subordinates?

To what extent does the operations order provide the necessary command organization and clearly articulate command-and-support relationships and assign responsibilities?

To what extent is the operations order internally valid—meaning are the annexes supportive of the base plan mission, tasks, and specific coordinating instructions?

E. Products:

Seminars will provide candid, constructive feedback to the seminar whose order has been critiqued. Students, led by the moderator team, will select one of the operations orders for execution.

F. Required Reading:

- U. S. Department of the Navy. *Navy Planning*. Naval Warfare Publication (NWP) 5-01. Norfolk, VA: Department of the Navy, December 2013. Review pp. 6-1 to 6-9, Scan Appendix L. **(Issued)**.
- U. S. Office of the Chairman, Joint Chiefs of Staff. *Joint Operation Planning*, Joint Publication (JP) 5-0, Washington, D.C.: CJCS, August 11, 2011. Read IV-44 to IV-57, Scan Appendix A. **(Issued)**.

G. Supplementary Readings:

- Depuy, William E., “Concepts of Operation: the Heart of Command, the Tool of Doctrine,” *Army* 38, no. 8 (August 1988).
- U. S. Army. *The Operations Process*. Army Doctrine Publication (ADP) 5. Washington, D.C.: Headquarters, Department of the Army, May 2012.
- U. S. Department of the Navy. *Navy Tactical Task List (NTTL)*. OPNAVINST 3500.38B/MCO 3500.26/USCG COMDTINST M3500.1B CH-1. 20 March 2008. Navy Doctrine Library System website ‘Tactical Task’ tab.
<https://ndls.nwdc.navy.mil/thinkmap/Thinkmap.aspx>
- U. S. Marine Corps. *Marine Corps Planning Process*. Marine Corps Warfighting Publication (MCWP) 5-1. Washington, D.C., U. S. Marine Corps, 2010.
- U. S. Office of the Chairman, Joint Chiefs of Staff. *Adaptive Planning and Execution (APEX) Planning Formats and Guidance*, CJCSM 3130.03. Washington, D.C.: October 18, 2012.

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NAVAL OPERATIONS SHORT OF WAR (Lecture)

Maritime security protects U. S. sovereignty and maritime resources, supports free and open seaborne commerce, and counters weapons proliferation, terrorism, transnational crime, piracy, illegal exploitation of the maritime environment, and unlawful seaborne immigration.

—A Cooperative Strategy for 21st Century Seapower, 2015

A. Focus:

The focus of this lecture is on the range of activities that navies conduct in support of national interests at sea that are short of war. The growing complexity and strategic importance of today's globalized maritime domain suggests the need for a firm understanding of the principles that underpin naval operations outside the context of high intensity armed conflict.

B. Objectives:

- Examine the objectives and methods of naval operations short of war.
- Understand the role of the principle of legitimacy in naval operations short of war.

C. Background:

The role of naval power in circumstances short of war is much different today than it was in the days of Mahan. Naval forces have always been used for non-war-fighting tasks during times of peace, but naval activities short of war now can have strategic effects like never before. The modern context is different from the last due to three factors: the impact of globalization on maritime commerce, changes in the threat environment, and the evolution of international maritime law.

The first of these, the impact of globalization on maritime commerce, has made the global web of maritime trade more complex, more interdependent, and more vital to the world's economic well-being than ever before. It has also made the maritime transportation system more vulnerable to disruption. Protecting this critical economic link is a vital national interest and a pillar of global stability.

The second element that has changed the maritime operating environment is the evolution of the threat. New technologies and the vulnerabilities of the increasingly interconnected maritime transportation system have raised the potential impact of crime and terrorism to a strategic level. Today, small sub-national groups and rogue states can create devastating effects with far-reaching consequences.

The third factor that makes the peacetime naval operating environment different today is the continuing evolution of international maritime law. For centuries, international maritime law was essentially restrictive in nature, aiming to impose a degree of fairness on the conduct of belligerents. In recent years a number of treaties and agreements have changed the dominant maritime law paradigm from one of separation to one of cooperation on matters of common interest. A level of international maritime cooperation in pursuit of common interests is possible today that would have been inconceivable a generation ago.

Success in this environment will depend on a firm understanding of the underlying principles of contemporary naval operations short of war, especially where they differ from the more familiar principles of naval warfare. Arguably the most important of these is the principle of legitimacy. Naval activities short of war aim to influence behavior and their efficacy often hinges on the activities being seen as legitimate. Legitimacy in turn is largely contingent on the right choice of a regime of authority for action. Where the law of armed conflict governs conduct during high intensity conflict, there is a broad and growing array of legal regimes that both enable and constrain activities short of war. Choosing the right regime of authority for action and fully understanding the implications of that choice can make the difference between strategic success and failure.

The point of contact for this session is Professor I. T. Luke, C-431.

D. Discussion Topics:

Describe some of the tasks that make up the contemporary range of naval operations short of war.

What are the objectives of the various naval operations short of war? How do these tasks contribute to the furtherance of national interests at sea?

What features make the peacetime naval operating environment different from the wartime environment? How should these influence the planning and conduct of naval operations short of war?

What role does the principle of legitimacy play in naval operations short of war?

E. Products:

None.

F. Required Readings:

Luke, Ivan T. "Legitimacy in the Use of Seapower" Newport, RI: U. S. Naval War College, Joint Military Operations Department, July 2015. (NWC 2133).

Vego, Milan. "On Naval Power." *Joint Force Quarterly*, (3d Quarter, 2008): 8-17. (NWC 2070).

G. Supplementary Readings:

- Cable, James. *Gunboat Diplomacy, 1919-1991: Political Applications of Limited Naval Force*. New York: St. Martin's Press, 1994.
- Eaglen, Mackenzie M., James Dolbow, Martin E. Andersen, and James J. Carafano. *Securing the High Seas: America's Global Maritime Constabulatory Power*. Heritage Special Report SR-20. Washington, D.C.: The Heritage Foundation, 2008.
- Kraska, James. "Grasping 'The Influence of Law on Sea Power.'" *Naval War College Review* 62, no. 3 (Summer 2009): 73-83.
- Luke, Ivan T. "Let's Get Serious About Peacetime Ops," *U. S. Naval Institute Proceedings* 139, no. 10 (October 2013): 54-48.
- _____. "Naval Operations in Peacetime: Not Just Warfare Lite," *Naval War College Review* 66, no. 2 (Spring 2013): 11-26.
- Rubel, Robert C. "Command of the Sea: An Old Concept Resurfaces in a New Form." *U. S. Naval War College Review* 65, no. 4 (Autumn 2012): 21-33.
- Till, Geoffrey. "A Changing Focus for the Protection of Shipping" in *The Strategic Importance of Seaborne Trade and Shipping: A Common Interest of Asia Pacific*, ed. Andrew Forbes. Canberra, Australia: Sea Power Centre – Australia, 2002.
- _____. *Seapower: A Guide for the Twenty-First Century*. 3d ed. London and New York: Routledge, 2013.
- Truver, Scott C. "Mines and Underwater IEDs in U. S. Ports and Waterways: Context, Threats, Challenges, and Solutions" *Naval War College Review* 61, no. 1 (Winter 2008): 106-127.
- Vego, Milan. "Employment of Naval Forces in Operations Short of War." Joint Military Operations Department, U. S. Naval War College, Newport, RI. December 2009.

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NAVAL SUPPORT OF FOREIGN POLICY (Seminar)

A man-of-war is the best ambassador.

—Oliver Cromwell, September 1643

A. Focus:

This session will explain and analyze the use of one's naval forces in support of national foreign policy (both national and under mandate by the United Nations). The focus of the session is on advantages and disadvantages in the employment of naval forces as a tool of foreign policy, the methods of naval diplomacy, and the use of naval forces in conflict prevention and management.

B. Objectives:

- Understand advantages and disadvantages in the employment of naval forces in support of foreign policy.
- Comprehend the main methods used in cooperative naval diplomacy.
- Know the main methods in applying coercive naval diplomacy.
- Understand main methods in the employment of naval forces in conflict prevention management.

C. Background:

Navies have been used in support of foreign policy by all major powers throughout history. In some situations naval forces can not only be the best but also the only instrument available to a political authority in support of its foreign policy objectives. Their main advantages are flexibility, mobility, and political symbolism. Naval forces have diverse capabilities that can be quickly tailored to the situation at hand. They are also largely self-sufficient and do not require extensive support from the land. Naval forces can be employed in support of the country's diplomatic initiatives in peacetime and time of crisis, or for naval diplomacy—actions aimed to create a favorable general and military image abroad, establish one's rights in areas of interest, provide reassurance to allies and other friendly countries, influence the behavior of other governments, threaten seaborne interdiction, and, finally, threaten the use of lethal force. Deployment of naval forces during times of tension or crisis to back up diplomacy and thereby pose an unstated but clear threat is what yet another tool for statesmen, the use of a navy as coercive tool.

Navies are much more suitable than armies or air forces in their international acceptability and ability to make the desired impact. They can be used symbolically to send a message to a specific government while not in themselves posing a threat to an opponent.

When a stronger message is required, naval diplomacy can take the form of employment of carefully tailored forces with a credible offensive capability, aimed to signal that a much more capable force will follow; or it can give encouragement to a friendly country by providing some reinforcement. The threat of the use of limited offensive action or coercion might be designed to deter a possible aggressor or to compel him to comply with a diplomatic demarche or resolution.

Employment of naval forces in support of foreign policy also has some inherent limitations. Naval forces are generally more effective in influencing behavior of rational state actors than no-state actors. Their effect is often less than desired if they are more or less permanently deployed in a certain sea/ocean area. Naval forces are relatively slow to arrive to the scene of action unless they are permanently deployed. Their effect is usually indirect rather than direct. Their employment is rather unpredictable in their results. Deployment of one's naval forces into the crisis area can actually cause more hostility not less. Naval forces rarely present a looming menace the way one's ground force deployed in large number close to the targeted country.

Naval forces can be used in naval diplomacy and conflict prevention and management. Naval diplomacy is defined as the employment of one's naval forces to further foreign policy objectives by influencing the thoughts and actions of foreign decision-makers and changing their behavior. Distinction is made between cooperative and coercive naval diplomacy. *Cooperative naval diplomacy* is aimed to visibly demonstrate the benefits to the targeted country if it reacts favorably to peaceful demonstration of one's naval power. In general, cooperative naval diplomacy consists of routine forward naval presence, sudden operational deployments, exercises/maneuvers, and port visits (routine, operational, diplomatic).

Coercive naval diplomacy (or popularly called "gunboat diplomacy") is described as the threat of the use or using a limited naval force to secure one's advantage or averting loss, either in furtherance of an international dispute or against foreign nationals within the territory or jurisdiction of their own state. In general, a coercive diplomacy seeks to reverse actions which have already occurred. It consists of a combination of diplomatic actions and the threat of, or the use of military force, including a naval force, to persuade an opponent to adopt a certain pattern of behavior against his wishes. Coercive naval diplomacy does not necessarily involve the use of lethal force. Its purpose including extracting diplomatic or financial concessions, obtaining access to naval/air bases on foreign territory, prevent a proxy of another power from obtaining access to a certain sea/ocean area, and rescue of one's nationals. Coercive naval diplomacy requires the employment of one's naval forces in a demonstrative manner and in discrete and controlled increments. The main methods of coercive naval diplomacy are "show the flag" (sending a powerful warship or group of warships to an unscheduled port visit), major naval exercises/maneuvers, operational deployment into the crisis area, unilateral or multilateral naval demonstration, rescue operations, and retaliatory raids.

Conflict prevention includes diverse military activities conducted either unilaterally or collectively under Chapter VI of the UN Charter and are aimed at either preventing escalation of disputes into armed conflict or at facilitating resolution of armed violence. These actions range from diplomatic initiatives to preventive deployment of naval forces. Under the UN Charter, conflict prevention should be conducted with strict impartiality, because all sides in a dispute have to agree to involve other countries as mediators. The main

methods for conflict prevention include threat of using a naval force, preemptive naval deployment, sending additional forces to the crisis area, conducting intensive reconnaissance of the crisis area, deploying a naval force close to the targeted country, public display of one's naval power, drastic increase/reduction of combat readiness of one's naval forces, and international naval demonstration. Naval forces, especially aircraft carrier strike groups and amphibious task forces, have a greater chance of success in disputes among nation-states than in ethnic conflict or civil war. To be effective, such a deployment should be accompanied by a clear willingness on the part of the international community to use overwhelming force if necessary. Otherwise, the preventive deployment of naval forces would rarely produce the desired effect.

Crisis management calls often for controlled capacity for violence or threat of violence resident in the one's naval forces ranging from benign influence to preventive deployments in support of achieving political objectives. The main methods used during conflict management are similar to those used in conflict prevention—operational deployments and increasing the levels of combat readiness of one's naval forces. Optimally, each method should contain several direct or indirect signals to be conveyed to the target decision makers, and to friendly and neutral observers.

The point of contact for this session is Professor Milan Vego, C-426.

D. Discussion Topics:

Explain and discuss the key advantages in the employment of naval forces in support of foreign policy. What are their disadvantages?

What are the main methods used in cooperative naval diplomacy?

Explain and analyze the main methods in applying coercive naval diplomacy.

What are the main methods in the employment of naval forces in conflict prevention and management?

E. Products:

None.

F. Required Reading:

Cassell, Joseph, F. *Naval Preventive Diplomacy*. Carlisle, PA: U. S. Army War College, 2001. (NWC 1211).

Rowlands, Kevin. "Decided Preponderance At Sea." *Naval War College Review*. Autumn 2012, Vol. 65, No. 4, 89-105. (NWC 1217).

Scarlett, Matthew. "Coercive Naval Diplomacy." Research Paper. Newport, RI: Joint Military Operations Department, U. S. Naval War College, May 2009. (NWC 1120).

G. Supplementary Readings:

Alily, George. *Naval Diplomacy: A Critical Component of National Power*. Princeton, NJ: Sungai Books, 2001.

Booth, Ken. *Navies and Foreign Policy* London: Routledge, 2014.

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Forbes, Andrew, ed. *Naval Diplomacy and Maritime Power Projection*. Proceedings of the Royal Australian Navy Sea Power Conference, 2013. Canberra: Sea Power Centre, 2014.

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McConnell, James M. and Anne M Kelly. *Superpower Naval Diplomacy in the Indo-Pakistani Crisis*. Alexandria, VA: Center for Naval Analysis, Professional Paper No. 108, February 1973.

Wills, John E. *China and Maritime Europe, 1500-1800: Trade, Settlement, Diplomacy, and Missions*. Cambridge: Cambridge University Press, 2011.

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HOMELAND SECURITY (Seminar)

This maritime strategy describes how we will design, organize, and employ the Sea Services in support of our national, defense and homeland security strategies.

—A Cooperative Strategy for 21st Century Seapower, 2015

A. Focus:

This seminar focuses on the contributions of naval forces to the task of securing the United States homeland against irregular maritime threats. This session includes a practical exercise to explore the capabilities and tactics of naval forces when responding to a developing maritime terrorism scenario.

B. Objectives:

- Comprehend the vulnerability of the U. S. homeland to irregular maritime threats.
- Understand the tactics and capabilities of naval forces that apply to the task of protecting the homeland.

C. Background:

The U. S. homeland is vulnerable to a range of potential maritime asymmetric threats including terrorism, illicit trafficking, trans-national crime, and environmental damage. The job of securing our maritime borders against these threats is challenging for a number of reasons. For one, the immensity of our maritime borders alone makes the task daunting. The United States has over 95,000 miles of coastline and 360 seaports. Additionally, the nature of the maritime operating environment makes the task of discriminating between potential threats and legitimate users of the sea very difficult. Additionally, with the U. S. economy highly dependent on the free flow of maritime trade, there is an economic imperative of not interfering with legal commerce. Further complicating the task, no single U. S. department, service, or agency has overall responsibility for maritime security although the Navy and the Coast Guard share much of the load.

As stated in *A Cooperative Strategy for 21st Century Seapower* (CS21), U. S. naval forces aim to interdict and defeat threats as far away from the homeland as possible. This assumes, of course, the threats are identified early. Maritime domain awareness is the key to early threat identification. Defeating threats far from the homeland also assumes that naval forces are positioned forward to respond. Forward naval presence is cited in CS21 as a fundamental principle for just this reason.

Defeating irregular maritime threats requires different tactics and capabilities than high intensity naval combat, and different principles apply. Most irregular maritime threats call for a law enforcement-like response rather than more conventional military action. As such the perceived legitimacy of such actions often depends on the choice of an appropriate regime of authority and acting in a way that is consistent with that authority, particularly in the use of force.

The point of contact for this session is Professor I. T. Luke, C-431.

D. Questions:

Describe the range of potential irregular maritime threats against the United States homeland. Which of these threats represents the greatest risk or vulnerability, and why?

Explain the aspects of the maritime domain that make it difficult to secure the U. S. homeland against irregular maritime threats.

What is maritime domain awareness and why is it so hard to achieve?

Describe the objectives and methods used by naval forces to secure the homeland against irregular maritime threats. How do naval tactics differ between homeland security and conventional naval combat?

How does the principle of legitimacy apply to maritime homeland security?

Is maritime security the same as maritime superiority or sea control? Why or why not? Does it matter?

E. Products.

None.

F. Required Readings:

Luke, Ivan T. U. S. Naval War College. Joint Military Operations Department. “*The Challenges of Maritime Homeland Security and Defense.*” Newport, RI: Naval War College, January 2013. (NWC 3148C).

G. Supplementary Readings:

Allen. Thad. “Friend or Foe? Tough to Tell.” *U. S. Naval Institute Proceedings* 134, no. 10 (Oct 2008): 14-19.

Greenberg, Michael D., et. al. *Maritime Terrorism, Risk and Liability*. Santa Monica, CA: The Rand Corporation, 2006.

Jones, Eric C. and Joseph E. Vorbach. "The Maritime Domain Awareness Conundrum." *U. S. Naval Institute Proceedings* 137, no. 10 (Oct 2011): 28-33.

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COMBATING PIRACY (Seminar)

The Navy has been involved in various approaches to suppressing or eliminating piracy. Consistently, the most effective method has been to attack and destroy the pirate base of operations. While the most effective, this is the most difficult, politically.

—Peter M. Swartz and Christine Fox,
Piracy and the United States Navy,
Canadian National Review, 2005

A. Focus:

This session focuses on the recent increase in piracy and examines the degree to which the U. S. military may effectively address the problem of piracy. The seminar examines the current issues regarding increased piracy in the East African areas and possible maritime approaches to the problem at the operational level.

B. Objectives:

- Comprehend the historical concepts of piracy and its more modern applications.
- Comprehend the military and non-military consequences of piracy and what those ramifications imply for operational planners.
- Examine and understand the challenges of combating piracy by U. S. and coalition forces working in coordination with other organizations (such as the UN).
- Examine the considerations involved with planning joint operations to deal with complex adaptive systems.
- Comprehend the relationships between state fragility and maritime security.

C. Background:

Piracy, an international crime consisting of illegal acts of violence, detention, or depredation committed for private ends, and the pirates who commit it has been a scourge of the global maritime environment throughout history. Attempting to gain wealth and power, this seaborne scourge has attacked merchant shipping and coastal communities throughout the world. While pirates typically operated independently, they have cooperated with governments to attack the maritime economy of other hostile states. Pirate fleets threatened Mediterranean shipping lanes in ancient times and had to be forcibly eliminated by Roman legions and fleets. Weaker maritime powers often supported pirates as an inexpensive investment that could harm another state's economy while simultaneously adding wealth to their own. Letters of marque and reprisal were issued in times of war to adventurous

civilian mariners, allowing them to attack the King's enemies while concurrently turning a profit. Nations discovered that pirates were much harder to eradicate after conventional conflict had ended, causing the European maritime powers to devote considerable time and force to eradicate the menace they had helped create. During the rampant imperialism of the eighteenth and nineteenth centuries, European nations conducted numerous minor operations to quell or suppress piracy in their colonies, permitting the unfettered flow of seaborne commerce back to homeland. The combination of advanced naval technology, numerous bases and dedicated naval forces provided the means to suppress piracy throughout most of the world during the twentieth century.

Despite these advances, piracy returned to the headlines following the end of the Cold War. Increasing global maritime trade, greater numbers of weaker states unable to control their maritime expanses, and decreasing global naval consensus to enforce the freedom of the seas allowed pirates to occupy ungoverned niches from which to assail merchant shipping. Attacking ships in important maritime chokepoints, pirates gained greater visibility from maritime insurance institutions and shipping firms. Desiring to maintain the free flow of trade and energy resources, naval forces were tasked to respond to this new, yet ancient, maritime threat.

The waters off of the Horn of Africa are perhaps the perfect storm for piracy. Here, a nexus of fragile and vulnerable states, a vital maritime chokepoint, and large numbers of undefended merchant vessels provide a happy hunting ground for pirates. International efforts to prevent and suppress piracy have achieved some successes, but the pirates are still able to successfully attack and seize ships. The establishment of a Combined Task Force to deal with the problem may be an important first step, but the operational commander must be able to use all elements of national power (from lawyers to Marines) to mitigate the threat.

The point of contact for this session is Professor Paul Povlock, C-410.

D. Discussion Topics:

What are the most effective tactics to use against pirates?

Does the aggregation/disaggregation of naval forces for counter-piracy operations work the same way as for defeating conventional military threats?

Historical case studies suggest that the best way to eliminate piracy is to strike at the pirate bases, yet this has not been attempted in the Horn of Africa. Why not?

How does the concept of legitimacy affect operations to combat piracy?

Explain the impact of treating pirates as criminals as compared to unlawful combatants.

Is piracy maritime terrorism? How does the operational commander distinguish the differences?

What are some of the challenges of setting up an operational level command to deal with piracy in the Horn of Africa?

Should a United Nations-led intervention be the preferred option of choice to deal with piracy in the Horn of Africa?

What other sources of national power might be employed to support military forces in the mitigation of piracy in the region?

E. Products:

None.

F. Required Reading:

Murphy, Martin. 2012. *Piracy*. CIWAG case study series 2011-2012, eds. Andrea Dew and Marc Genest. Newport, RI: U. S. Naval War College, Center on Irregular Warfare and Armed Groups. Read pp. 12-72. (NWC 4142).

G. Supplementary Reading:

Alexander, John. Piracy: The Best Business Model Available. JSOU Report. McDill AFB, Tampa, FL: Joint Special Operations University, 2013.

Chalk, Peter. The Maritime Dimension of International Security. RAND Report. Santa Monica, CA: RAND, 2008.

Chalk, Peter, Laurence Smallman, and Nicholas Burger. Countering Piracy in the Modern Era. RAND Report. Santa Monica, CA: RAND, 2009.

Genovese, Scott. "The Maritime Operational Threat Response Plan: The Unified U. S. Maritime response to Maritime Piracy." *Proceedings of the Marine Safety and Security Council* 69, no.1 (Spring 2012): 56-57.

Hastings, Justin V. and Sarah G. Phillips. "Maritime Piracy Business Networks and Institutions in Africa." *African Affairs* 114, no. 457 (2015).

Kraska, James. "Coalition Strategy and the Pirates of the Gulf of Aden and the Red Sea." *Cooperative Strategy* 28 (2009): 197-216.

Kraska, James and Brian Wilson. "Somali Piracy: A Nasty Problem, a Web of Responses." *Current History*, (2009).

_____. "Fighting Pirates: The Pen and the Sword." *World Policy Journal* (Winter 2008/2009): 41-52.

Liss, Carolin. "The Privatisation of Maritime Security-Maritime Security in Southeast Asia: Between a Rock and a Hard Place?" Working Paper, Perth Australia: Asia Research Center, 2007.

Møller, Bjørn, *Hoist the Jolly Roger: Piracy, Maritime Terrorism and Naval Strategy* (preliminary version, 16 November 2008).

_____. *Piracy, Maritime Terrorism, and Naval Strategy.* Copenhagen: Danish Institute for International Studies, 2009.

O'Meara, Richard M. "Maritime Piracy in the 21st Century: A Short Course for U. S. Policy Makers." *Journal of Global Change and Governance* 1, no. 1 (Winter 2007): 1-8.

Swartz, Peter M. "U. S.-Greek Naval Relations Begin: Antipiracy Operations in the Aegean Sea." Alexandria, VA: Center for Strategic Studies, 2003.

Swartz, Peter M. and Christine Fox. "Piracy and the United States Navy." Draft. Alexandria, VA: Center for Naval Analysis, 2005.
http://naval.review.cfps.dal.ca/pdf/Schwartz-Fox_Dec08.pdf (accessed 16 November 2010).

United Nations Security Council. "On Fight Against Piracy And Armed Robbery At Sea Off The Coast Of Somalia." S/Res/1851. (2008).

_____. *United Nations Convention on the Law of the Sea.* Third United Nations Conference on the Law of the Sea. 1983. Articles 100-106 and 111.

U. S. Department of the Navy. Naval Warfare Publication 1-14M, *The Commander's Handbook on the Law of Naval Operations.* Norfolk, VA: Department of the Navy, 2007.

U. S. Government Accountability Office. *Maritime Security, Actions Needed to Assess and Update Plan and Enhance Collaboration among Partners Involved in Countering Piracy off the Horn of Africa.* Washington, D.C.: GAO, 2010.

U. S. National Security Council. *Countering Piracy off the Horn of Africa: Partnership & Action Plan.* Washington, D.C.: NSC, 2008.

U. S. Navy, U. S. Marine Corps, U. S. Coast Guard. *A Cooperative Strategy for 21st Century Seapower.* Washington, D.C.: Headquarters, U. S. Navy, Marine Corps, and Coast Guard. March 2015.

_____. *Naval Operations Concept 2010, Implementing the Maritime Strategy.* Washington, D.C.: Department of the Navy, 2010.

Vego, Milan. "Counter-Piracy: An Operational Perspective." Newport, RI: Naval War College, 2009.

Weir, Gary. "Fish, Family, and Profit." *Naval War College Review* 62, no. 3 (Summer 2009): 15-29.

The White House. *The National Strategy for Maritime Security*. Washington, D.C.: The White House, September 2005.

_____. *United States Counter Piracy and Maritime Security Action Plan*. Washington, D.C.: The White House, June 2014.

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FOREIGN HUMANITARIAN ASSISTANCE/ DISASTER RELIEF (Seminar)

In August 2010, the Navy–Marine Corps team once again aggregated two ARG/MEUs in that region, but this time for the purpose of conducting humanitarian assistance operations in the wake of flooding caused by torrential rains in Pakistan.

—A Cooperative Strategy for 21ST Century Seapower, 2015

A. Focus:

This session focuses on the military mission area of Foreign Humanitarian Assistance, Disaster Relief (FHA/DR) operations. Sometimes conducted as an immediate response effort after an earthquake, tsunami, or other natural disaster, and other times as part of more complex, longer-term contingency operations, FHA/DR is an important element in the spectrum of military operations for which the joint force commander must plan. FHA/DR missions differ from other missions in a number of ways. For example, military forces participating in FHA/DR are not in the lead, but rather operate in support of the larger U. S. effort, led by the U. S. Agency of International Development's Office of Foreign Disaster Assistance (OFDA), which sets the objectives, priorities, and exit criteria. Also, FHA/DR missions are logistics-intensive; the joint logistics function is normally the main effort.

B. Objectives:

- Appreciate the complexity of humanitarian assistance/disaster relief operations, the range of potential military FHA/DR tasks, and the factors which should be considered when planning or executing FHA/DR.
- Understand the role of USAID/OFDA as the lead federal agency for foreign humanitarian assistance and the military-USAID/OFDA relationship during FHA/DR operations.
- Understand the capabilities and limitations specific to the use of expeditionary maritime forces in FHA/DR.

C. Background:

It is often in the national interest of the United States to render assistance when other nations experience large scale human suffering due to natural or man-made disasters. Aside from altruistic or moral motivations, U. S. interests are often furthered by such relief efforts. The 2004 post-earthquake and tsunami Humanitarian relief operations in Sumatra is an example where an opportunity existed to cast U. S. personnel, especially U. S. military

personnel, in a positive light in a nation of strategic interest where we would otherwise have limited / no access. Such operations sometimes constitute the most effective kind of strategic communications.

While the focus of this session is on the military's role in foreign disaster response, it is important to recognize that the U. S. military only participates in a fraction of the instances where the United States provides assistance. In recent decades the United States government has responded to approximately 50-60 foreign disasters a year, while the U. S. military participated in only about 10 percent of these. The military normally becomes involved only when a particular military capability is needed and offers a significant advantage. The Department of State is the lead (supported) agency for U. S. foreign disaster relief efforts, and exercises this responsibility primarily through the Office of Foreign Disaster Assistance (OFDA), a subcomponent of the U. S. Agency for International Development (USAID). When the U. S. military conducts FHA/DR operations, it is done in support of USAID/OFDA. Most often, the preponderance of U. S. disaster response material assistance is provided by civilian organizations, contractors and NGOs, under contract to OFDA.

Whether the military is involved or not, a defining characteristic of disaster relief FHA is surprise; and the primary challenge is factor time, or the lack thereof. Obviously we can never know in advance when or where a disaster will strike, so other than preparing based on historical trends and known vulnerabilities; we can never be fully ready before the crisis occurs. Additionally, the very nature of disaster response is that speed of response is crucial. Disaster victims need help *now*. Planning time for disaster relief operations is, therefore, almost always minimal; typically often a matter of days, if not hours. To a large degree, a delayed response is a failed response. When the military is called to assist with foreign disaster relief operations, it is often because one or more military capabilities can help address the issue of factor time.

The challenge of factor time is exacerbated by the inescapable fact that situational awareness in the initial stages of disaster response is almost always poor. Key planning factors such as the extent of the suffering, priority of needs, status of infrastructure, availability of resources, and even the political "landscape" are often unknown or inaccurately reported early-on. When coupled with the no-notice nature of these operations, this means that we often end up deploying with whatever forces are readily available, rather than those actually needed, and conducting our planning very much on the fly. The 2011 Pacific Tsunami, the 2010 Haitian earthquake, the 2004 Indian Ocean tsunami, and the 2005 Pakistani earthquake demonstrate how these challenges shape DoD FHA disaster response operations.

Planning for FHA is particularly challenging. All geographic combatant commanders maintain functional plans for humanitarian assistance. However, the nearly infinite variation in potential disaster types and locations in a combatant commander's AOR renders it impossible to pre-plan responses much beyond the cursory level. Once a disaster occurs, speed of response is of the essence, and planning is often done on the fly. Given these constraints, a solid understanding of the fundamental factors and considerations unique to the HA mission is crucial.

The point of contact for this session is Colonel Greg Bell, USA, C-408.

D. Discussion Points:

Describe the range of military tasks that might be useful in FHA/DR. What military components could provide those tasks?

What characteristics of expeditionary maritime forces make them particularly useful for FHA/DR response? What limitations constrain their use in this role?

When planning for or executing FHA/DR, do any of the joint functions deserve more or less emphasis than for other types of operations?

To what degree does Operational Art apply to missions such as FHA where there is no sentient enemy to analyze and attack?

What are the key considerations for developing and executing an exit strategy for FHA/DR operations?

E. Products.

None.

F. Required Readings:

O'Connor, Cathal. "Foreign Humanitarian Assistance and Disaster-Relief Operations: Lessons Learned and Best Practices." *Naval War College Review* 65, no. 1 (Winter 2012): 152-160. (NWC 3163).

Shaw, Eric. U. S. Naval War College, Joint Military Operations Department. "Operation Unified Assistance: 2004 Sumatran Earthquake and Tsunami Humanitarian Relief." Newport, RI: Naval War College, May 2013. (NWC 6050).

U. S. Office of the Chairman of the Joint Chiefs of Staff. *Foreign Humanitarian Assistance*, Joint Publication (JP) 3-29. Washington, D.C.: CJCS, 3 Jan 2014. Read Executive Summary and Chapters I and III.

G. Supplementary Readings:

Braithwaite, Kenneth J. "U. S. Humanitarian Assistance/Disaster Relief: Keys to Success in Pakistan." *Joint Force Quarterly*, 44 (2007): 19-22.

Ear, Jessica. "Education Crucial to future U. S, HADR Missions." *Asia-Pacific Center for Security Studies* (accessed 7 January 2015). <http://www.apcss.org/education-crucial-to-future-u-s-hadr-missions>.

Elleman, Bruce A. *Shaping the Maritime Environment: An Operational History of the U. S. Navy's Role in "Unified Assistance."* Newport, RI: Naval War College Press, 17 August 2006.

_____. *Waves of Hope, The U. S. Navy's Response to the Tsunami in Northern Indonesia.* Newport Paper 28. Newport, RI: Naval War College Press, February 2007.

Headquarters, Department of the Army. "Working With the Office of U. S. Foreign Disaster Assistance." GTA 41-01-006, October 2007.

Natsios, Andrew S. "Commander's Guidance: A Challenge of Complex Humanitarian Emergencies." *Parameters* 26 (Summer 1996): 50-66.

United Nations. "The Use of Military and Civil Defense Assets to Support United Nations Humanitarian Activities in Complex Emergencies." New York: United Nations Headquarters. March 2003.

U. S. Agency for International Development. Bureau for Humanitarian Response. Office of Foreign Disaster Assistance. *Field Operations Guide* (Version 4.0, September 2005).

U. S. Institute of Peace, *Taking It To The Next Level: Civilian-Military Cooperation in Complex Emergencies*, Virtual Diplomacy Initiative.

U. S. Office of the Chairman of the Joint Chiefs of Staff. *Inter-organizational Coordination during Joint Operations.* Joint Publication (JP) 3-08. Washington, D.C.: CJCS, 24 June 2011.

Vohr, James A. "Haiti Disaster Relief: Logistics is the Operation." *Military Review* (July-August 2011): 76-82.

Wilhelm, Phillip. "USAID and DoD Roles in Foreign Disaster Response" *Joint Center for Operational Analysis Journal* IX, no. 3 (September 2007): 30-34.

INSURGENCY (Seminar)

In great campaigns, the opponents system is understood; he is guided by like precedents, and is governed by the same code; it is only when some great reformer of the art of war springs up that it is otherwise. But each small war presents new features, and these features must if possible be foreseen or the regular troops will assuredly find themselves in difficulties and meet with grievous misfortune.

—Colonel C. E. Callwell,
Small Wars, Their Principles and Practice, 1906

A. Focus:

This session begins a discussion of the so-called Small Wars. Our first session focuses on the fundamental characteristics and types of insurgencies. By framing the operational environment to distill the root causes of insurgency, students will better understand the challenge of designing counterinsurgency operations. Using elements of operational art and analytical frameworks adapted to evaluate complexity, students will gain the capacity to understand the operational environment and analyze the nature and typology of a problem that clearly manifests itself as a Complex Adaptive System—insurgencies. This, in turn, will enable them to devise effective operational plans for countering that insurgency.

B. Objectives:

- Comprehend the role of violence in revolutionary warfare.
- Comprehend the joint doctrine perspective on insurgency.
- Using theory, doctrines, and analysis of historical case studies, understand the common causes of insurgency, the fundamental structure of insurgencies, and how insurgencies are generally sustained.

C. Background:

Although the U. S. military has historically participated in numerous conflicts against insurgents, it has been far more enthusiastic about conflict at the upper end of the range of military operations. Conflicts involving one (or more) insurgencies drag on for years, are rife with political/strategic/operational challenges, and are the least likely to respond to the conventional application of military force. We may safely assume that insurgencies will continue, although their environment, specific forms, and tactics may change. Military officers and members of civilian agencies must understand how to operate in politically

uncertain and ambiguous environments against “weak” foes that play by very different rules.

To successfully fight an insurgency, one should understand the nature of the insurgency—what caused it, what sustains it, and so forth. This is difficult, as while insurgencies share certain fundamental characteristics, each insurgency is unique. Historical, cultural, political, and economic factors must be recognized as integral to a meaningful analysis. A design methodology may be of particular use in identifying the complex, adaptive nature of the environment, the root causes of the conflict, possible objectives, and possible operational approaches.

Insurgency is discussed over the next two sessions in order to make connections and draw conclusions about insurgencies and counterinsurgencies in the contemporary environment. This session, however, is devoted to the theory and analysis of insurgency. The next session, *Counterinsurgency* focuses on both understanding and countering insurgencies through the examination of historical case studies.

The points of contact for this session are Colonel Chris Connolly, USA, C-431 and Captain Carl Tiska, USN, C-426.

D. Discussion Topics:

Explain the relationship between the existence of an insurgency and the perceived legitimacy of a host nation government or occupying force. How can a government establish legitimacy?

Explain the relationship of the operational factors of time, space, and force with an objective involving an insurgent adversary.

Describe the factors that must be present for an insurgency to develop and possibly succeed. Which do you feel are the most important? Why?

Explain how environmental factors determine insurgent objectives, approaches, and access to resources.

Describe how the political / social / cyber environment can be used by an insurgent to achieve their objectives.

Some argue that in the future, insurgencies will increase in frequency while incidents of conventional warfare will recede. Do you agree with this outlook? Why?

How has the global al-Qaeda threat differed from earlier insurgencies (or does it differ)?

E. Products

None

F. Required Readings:

Fall, Bernard B. "The Theory and Practice of Insurgency and Counterinsurgency." *Naval War College Review* (Winter 1998): 46-57. [Originally published in the April 1965 *NWCR* from a lecture delivered at the Naval War College on December 10, 1964]. (NWC 3097).

Murphy, Martin N. "The Blue, Green, and Brown: Insurgency and Counterinsurgency on the Water." *Contemporary Security Policy* 28 (April 2007): 63-75. (NWC 4041).

U. S. Office of the Chairman of the Joint Chiefs of Staff. *Counterinsurgency*, Joint Publication (JP) 3-24. Washington, D.C.: CJCS, November 22, 2013. Scan: Chapter I and Read: Chapter II and III-1 thru III-3.

Waghelstein, John, and Donald Chisholm. "Analyzing Insurgency." Newport: Naval War College, 2006. (NWC 3099).

Case Studies:

Greenberg, Lawrence M. Extract from "The Hukbalahap Insurrection: A Case Study of a Successful Anti-Insurgency Operation in the Philippines, 1946-1955." Washington, D.C.: U. S. Army Center of Military History, 1987. (NWC 3102A).

Povlock, Paul A. *A Guerilla War at Sea: The Sri Lankan Civil War*. Small Wars Foundation, 2011. (NWC 3189).

Waghelstein, John D. "Military-to-Military Contacts: Personal Observations—The El Salvador Case." Newport, RI: Naval War College, 2005. (NWC 3038).

G. Supplementary Readings:

Asprey, Robert B. *War in the Shadows*. Garden City, NY: Doubleday, 1975.

Callwell, C. E. *Small Wars: Their Principles and Practice*. 3d ed. Lincoln, NE: University of Nebraska Press, 1996.

Metz, Steven and Raymond Millen. "Insurgency and Counterinsurgency in the 21st Century: Reconceptualizing Threat and Response." Carlisle, PA: U. S. Army Strategic Studies Institute, 2004.

O'Neill, Bard. *Insurgency and Terrorism*. London: Brassey's, 2005.

Record, Jeffrey. *Beating Goliath, Why Insurgencies Win*. Washington, D.C.: Potomac Books, Inc., 2007.

Springer, Phillip B., and Marcello Truzzi, eds. *Revolutionaries on Revolution*. Pacific Palisades, CA: Goodyear Publishing Co., 1973.

Tse-Tung, Mao. *On Guerilla Warfare*. 2d ed. Edited by Samuel B. Griffiths. Champaign, IL: University of Illinois Press, 2000.

United States Marine Corps. *Small Wars Manual*. With an Introduction by Ronald Schaffer. Manhattan, KS: Sunflower University Press, 1996. [Originally Published 1940].

COUNTERINSURGENCY (Seminar)

Even a well-crafted COIN campaign is not a silver bullet if the strategic level policy is flawed.

—Christopher Tuck

A. Focus:

This session complements the previous seminar, *Insurgency* and addresses the challenge of designing counterinsurgency operations. Having learned to analyze an insurgency, the aim of this session is for the student to appreciate the aggregation and integration of methods—from design through operational art to current doctrine—required to develop an effective counterinsurgency operation.

B. Objectives:

- Comprehend the fundamental elements of planning for and conducting COIN operations.
- Comprehend the relevance of various elements of operational art in planning COIN operations.
- Apply analytical frameworks for analyzing counterinsurgency operational approaches.
- Using theory, doctrines, and analysis of historical case studies, compare the relative effectiveness of military power against the other instruments of national power in COIN.

C. Background:

Since the end of World War II, the U. S. military has compiled a record of mixed results in counterinsurgency operations. There are a variety of reasons for this and none are conclusive. U. S. involvement in counterinsurgency has often failed for political reasons or mismatched strategy. Many argue the reason that senior military leaders struggle with the challenges of counterinsurgency operations is that they offer a completely different type of complexity than conventional operations—complexities that do not fit easily into Joint or Service planning processes.

Counterinsurgency operations involve greater uncertainty and ambiguity because factor time often encompasses a decade—or decades. Moreover, shifting social and political issues make operational assessments difficult to judge, even in hindsight. Theory and doctrine clearly underscore the impotency of conventionally strong militaries in combating insurgents; the military is then often cast in a supporting role to civilian agencies during counterinsurgency. Ironically, the military often remains responsible for the heavily lifting in a “whole of government” operational approach; such contradictions are often the norm in COIN operations. Finally, as discussed in the insurgency session, astute adversaries

constantly adapt at the tactical and operational levels, often deliberately remaining “weak” while presenting the appearance of defeat. Consequently, it follows that information operations figure prominently in counterinsurgency efforts, to include the cogent use of the cyber domain.

This session focuses on developing a successful operational design for COIN operations. It provides students with the opportunity to employ analytical frameworks to evaluate specific cases of insurgency / counterinsurgency, some of which succeeded, failed, or is ongoing. A historically grounded understanding of the basic characteristics of effective counterinsurgency efforts will provide a foundation for designing future counterinsurgency operations.

The points of contact for this session are Colonel Chris Connolly, USA, C-431 and Captain Carl Tiska, USN, C-426.

D. Discussion Topics:

What characteristics are common to effective counterinsurgency operations? Which do you consider the most important?

How do operational planners determine the role of military force in COIN operations? How do planners effectively integrate other instruments of national power?

Some insurgencies operate in the maritime domain, ranging from inshore and near-shore waters to offshore operations. What advantages do insurgents gain from operating in the maritime domain? What challenges do insurgents face when operating in maritime domain?

In what ways can naval forces contribute to counter-insurgency operations?

Why do insurgencies with similar characteristics call for very different counterinsurgency methods and operations? How does this impact development of doctrine?

Does the application of operational art differ between COIN operations and conventional warfare? Why (and in what ways) is operational design different?

Why is it difficult for operational commanders to design effective COIN operations?

E. Products:

Students will read the case studies below and brief the seminar on relevant insurgency/ COIN practices.

F. Required Readings:

Dunigan, Molly, Dick Hoffmann, Peter Chalk, Brian Nichiporuk, and Paul DeLuca. *Characterizing and Exploring the Implications of Maritime Irregular Warfare*. Santa Monica, CA: RAND Corporation, 2012. Read: pp. 1-49 and 94-96. (NWC 3205).

Peterson, Terrence. "Myth-Busting French Counterinsurgency." *War on the Rocks*, December 3, 2015. (NWC 3199).

Sepp, Kalev I. "Best Practices in Counterinsurgency." *Military Review* Volume LXXXV, No. 3 (May-June 2005): 8-12. (NWC 3119).

U. S. Office of the Chairman of the Joint Chiefs of Staff. *Counterinsurgency*, Joint Publication (JP) 3-24. Washington, D.C.: CJCS, November 22, 2013. Read: Chapter III-4 thru III-25, Chapter V-1 thru V-7, and Scan Appendix D.

Case Studies (Continued from JMO-64):

Greenberg, Lawrence M. Extract from "The Hukbalahap Insurrection: A Case Study of a Successful Anti-Insurgency Operation in the Philippines, 1946-1955." Washington, D.C.: U. S. Army Center of Military History, 1987. (NWC 3102A).

Povlock, Paul A. *A Guerilla War at Sea: The Sri Lankan Civil War*. Small Wars Foundation, 2011. (NWC 3189).

Waghelstein, John D. "Military-to-Military Contacts: Personal Observations—The El Salvador Case." Newport, RI: Naval War College, 2005. (NWC 3038).

G. Supplementary Readings:

Beckett, Ian F. W. *Modern Insurgencies and Counterinsurgencies: Guerillas and Their Opponents since 1750*. London: Routledge, 2001.

Callwell, C. E. *Small Wars: Their Principles and Practice*. 3d ed. London: General Staff—War Office, 1906.

Cassidy, Robert M. *War, Will, and Warlords: Counterinsurgency in Afghanistan and Pakistan, 2001-2011*. Quantico, VA: Marine Corps University Press, 2012.

_____. "Why Great Powers Fight Small Wars Badly." *Military Review* (September–October 2002): 41–53.

Cordesman, Anthony H. *The Iraq War and Its Strategic Lessons for Counterinsurgency*. Washington, D.C.: Center for Strategic and International Studies, 8 December 2005.

- Croziat, Victor J. "Naval Forces in River War." *U. S. Naval Institute Proceedings* 92 (October 1966): 52-61.
- McClintock, Robert. "The River War in Indochina." *U. S. Naval Institute Proceedings* 80 (December 1954): 1303-11.
- Sarkesian, Sam C. *America's Forgotten Wars: The Counterrevolutionary Past and Lessons for the Future*. Westport, CT: Greenwood Press, 1984.
- Tomes, Robert R. "Relearning Counterinsurgency Warfare." *Parameters* (Spring 2004): 16–28.
- U. S. Marine Corps. *Small Wars Manual*. With an Introduction by Ronald Schaffer. Manhattan, KS: Sunflower University Press, 1996. [Originally Published 1940].
- Vick, Alan J., Adam Grissom, William Rosenau, Beth Gill, and Karl P. Mueller. *Air Power in the New Counterinsurgency Era: The Strategic Importance of USAF Advisory and Assistance Missions*. Santa Monica, CA: RAND, 2006.

HYBRID AND UNCONVENTIONAL WARFARE, AND CIVIL-MILITARY OPERATIONS (Seminar)

If the war [between Israel and Hizballah] showed anything, it was how insidious the effect of “professional” lingo can be. How does one distinguish “strategic intelligence superiority” from “operational-tactical intelligence dominance”...so thick was the nonsense, and such the resulting verbal confusion, that the need to reform officer training and education...became one of the cardinal lessons to emerge from the conflict.

—Martin Van Creveld, *The Changing Face of War*

A. Focus:

This session complements the preceding two seminars on *Insurgency* and *Counterinsurgency* by examining the concepts of hybrid warfare and unconventional warfare in order to address the challenges of determining the patterns of conflict in the contemporary environment as well as the challenges of shaping an effective operational approach for seemingly incomprehensible (and therefore insoluble) conflicts. While the nature of warfare arguably remains unchanged, its character, or how warfare is waged, changes on an evolutionary (and sometimes revolutionary) scale. This session will additionally examine the role of civil-military operations as part of a military campaign, particularly counter-insurgencies.

B. Objectives:

- Comprehend evolving trends in warfare and the implications of these for operational planning and execution.
- Understand contemporary notions of hybrid warfare and unconventional warfare, and their effect on joint doctrine.
- Evaluate the effectiveness of contemporary state and non-state actors in achieving their objectives through use of hybrid warfare and unconventional warfare operational approaches.
- Understand the nature of civil-military relations at the operational level of war.
- Examine the Joint Force Commander’s responsibilities for Civil-Military Operations.
- Understand how civil-military operations fit into the overall campaign plan or operational plan and how its effective use complements stability operations.

C. Background:

Unconventional warfare and hybrid warfare are terms that are used to capture multiple and evolving patterns of modern conflict. For example, strategists and military experts struggle to categorize the current conflict in eastern Ukraine or the multiple conflicts sweeping Syria /Northwestern Iraq. While the former example could be a state (Russia) fomenting instability in another state (Ukraine) through unconventional means, the latter includes a chaotic mix of insurgent groups vying for political control of Syria; internationally recognized terrorist groups with opaque agendas; and non-state actors that are seeking to establish regional political control irrespective of the international borders of several states. In the past, conflicts such as these may not have mattered much to U. S. strategic calculations. In today's global security environment, where second and third order effects are not limited by geography, this is no longer true. Non-state actors and terrorist organizations actively recruit and procure resources using information networks that span the globe and easily cross language, culture, ethnic, and religious boundaries. Insurgent groups have a far greater access to successfully co-opt external military and diplomatic support in order to negate the traditional advantages possessed by adversarial government regular forces. Weaker states increasingly are turning to the cyber domain in order to find asymmetric ways to compete with stronger military and economic powers. Strong regional powers are using unconventional warfare and proxy forces to pursue strategic objectives while avoiding diplomatic and economic condemnation by the international community. While history may provide comparable examples, most would agree that the exponential growth of computer networking over the last 20 years has afforded new and innovative opportunities for armed groups and organizations to successfully pursue their objectives while avoiding the debilitating blows by strong, professional military forces such as the U. S. military.

Creating unity of effort among instruments of power is the essence of civil-military operations. Civil-Military Operations are not a new phenomenon stemming from the wars in Iraq and Afghanistan. In almost every conflict there has been some form of civilian-military interface. Civil-Military Operations are conducted across the range of military operations, but their real value is during the planning and transition to post-hostility operations and, ultimately, the transition to conflict termination and retrograde operations. Regardless of the type of mission, the current battle field finds a host of civilian agencies and organizations working alongside military units. Intergovernmental organizations, non-governmental organizations, civilian contractors, local governments, personnel from various agencies within the U. S. Government are all present, as well as the civilian population living in the area of the conflict. How the military interacts with these civilian personnel is critical to the Joint Force accomplishing its objectives.

The points of contact for this session are Colonel Chris Connolly, USA, C-431 and Captain Carl Tiska, USN, C-426.

D. Discussion Topics:

Are emerging trends in warfare new, or do they represent a return to historical ways of prosecuting war?

Discuss the common threads in several concepts of conventional, irregular, hybrid, unconventional, political, and unrestricted warfare. How do these concepts differ?

How do irregular forces use Land, Sea, Air, and Cyber domains asymmetrically against a state that employs traditional regular military forces?

How can the U. S. counter states engaging in unconventional warfare?

What complexities do hybrid warfare and unconventional warfare present to the joint force commander and staff when conceptualizing military operations? Are existing planning processes adequate for addressing these challenges?

How do effective civil-military operations contribute to unity of effort of effort in execution of assigned missions?

Describe what civilians might be present in the operating environment and how might the joint task force effectively work with them.

What is the role of civil affairs in staff planning and in executing COIN operations?

E. Products:

None.

F. Required Readings:

Boot, Max and Michael Doran. *CFR Policy Innovation Memorandum 33 – Political Warfare*. New York, NY: Council on Foreign Relations, June 7, 2013. (NWC 4152).

Crowell, Richard M. “Analyzing Hybrid Warfare.” Newport RI: Naval War College, 2015. (NWC 3084C).

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Hoffman, Frank G. “Hybrid Warfare and Challenges.” *Joint Force Quarterly*, No. 52 (1st Quarter, 2009): 34-39. (NWC 7008).

Lacquement, Richard A. “Integrating Civilian and Military Activities.” *Parameters* 40, No. 1 (Spring 2010): 20-32. (NWC 3195).

Maxwell, David S. “Do We Really Understand Unconventional Warfare?” *Small Wars Journal*, October 23, 2014. (NWC 3204).

U. S. Office of the Chairman of the Joint Chiefs of Staff. Civil-Military Operations. Joint Publication (JP) 3-57, 11 September 2013. Read: II-14 to II-26, IV-1 to IV-13 and Annex A to Appendix A, pp A-A-1 to A-A-6.

G. Supplementary Readings:

The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Against the United States. Washington, D.C.: GPO, July 2004.

Blanchard, Christopher M. *Al Qaeda: Statements and Evolving Ideology.* Washington, D.C.: Congressional Research Service, 2005.

Gray, Colin. "Irregular Warfare: One Nature, Many Characters." Maxwell AFB, AL: Air Force Symposium 2007: "Counterinsurgency." 24-26 April 2007.

_____. *Another Bloody Century, Future Warfare.* London: Weidenfeld & Nicolson, 2006.

Hoffman, Frank G. "Conflict in the 21st Century." Potomac Institute for Policy Studies, Arlington VA, December 2007.

Krause, Michael G. "Square Pegs for Round Holes: Current Approaches to Future Warfare and the Need to Adapt." Working Paper No. 132. Australia: Land Warfare Studies Centre, June 2007.

Liang, Qiao and Wang Xiangsui. *Unrestricted Warfare: China's Master Plan to Destroy America.* Peking: Natraj Publishers. 2007.

Mattis, James N. "Future Warfare: The Rise of Hybrid Wars." *U. S. Naval Institute Proceedings* 131 (November 2005): 18-19.

PEACE OPERATIONS (Seminar)

Peacekeeping is not a job for soldiers, but only soldiers can do it.

—Dag Hammarskjöld,
UN Secretary General, 1953-1961

A. Focus:

This session focuses on peace operations from an operational level perspective. It considers the central issues of the evolution of peace operations, the role of peacekeepers in conflict settings, UN peacekeeping missions globally and the basic principles of peacekeeping. This session will approach peace operations as they are conducted today and will also address how naval forces might be involved in peace operations.

B. Objectives:

- Comprehend the evolution of peace operations since their inception in the late 1940s and how the United States military might perform such an operation.
- Comprehend the difference between peacekeeping, peace enforcement, and peacebuilding.
- Understand the role of international organizations, especially the United Nations, in exercising their responsibility to maintain international peace and security by conducting peace operations.
- Comprehend how naval forces might be involved in peace operations.
- Comprehend how the United States might use peace operations to enhance foreign policy by training peacekeepers or committing U. S. forces to peace operations;
- Comprehend how other nations' view peacekeeping and the value to their military.

C. Background:

The commitment of U. S. forces to peace operations (peacekeeping and peace enforcement, peacemaking and peacebuilding) has proven controversial during the last few decades. Of the two basic camps in this policy debate, one favors a broader use of U. S. forces in many roles while the other reserves the role of the U. S. military for war fighting. The issues of combat readiness, the flexibility in the use of force, command and control arrangements, and the role of the U. S. military in the post-Cold War era have been and remain an integral part of this debate. With U. S. involvement in Afghanistan waning after over a decade of war, the Department of Defense is looking at the possibility of re-engaging with U. S. participation in peacekeeping missions. Consider how might a geographic

combatant command use peacekeeping to help end a conflict or stabilize a country emerging from war?

This seminar will focus on peace operations as they are conducted mostly by the United Nations, but also the role of regional organizations, such as NATO, in peace operations. The United States has a long history of participating in peace operations and the related stability operations (peace operations is a subset of stability operations). Shortly after the end of the Cold War and during the Clinton Administration, the U. S. military was more involved in peace operations. American forces found themselves deployed to the Sinai, Somalia, Haiti, Bosnia, and Kosovo in a peacekeeping role. Even some American peacekeepers were used in less known conflicts, which included Liberia, East Timor, the Middle East and the Western Sahara.

After 9/11 and the commitment of U. S. forces to Afghanistan and Iraq, there was less use of American forces in peace operations. Commitments to the Sinai and Kosovo, however, remained for Army National Guard Forces. Yet globally, peace operations conducted by the United Nations continued unabated and actually expanded. Historically, the U. S. Army conducted more peace operations than the other services, but naval forces have played various roles. Following World War I, U. S. naval forces were involved in what could be labeled peace and stability operations in Turkey. Admiral Mark Bristol, USN, was appointed the High Commissioner for U. S. activities in Turkey and the surrounding waters of the Black Sea and the Straits of Bosphorus and Dardanelles. For the Allies, the British High Commissioner was largely in charge of the peace process brought about by the Armistice. Admiral Bristol was appointed the senior U. S. diplomat for relations with Turkey. In this capacity he was responsible for the U. S. management of the terms of the Armistice as well as providing much needed relief supplies. He commanded all U. S. forces in Turkey which included some ground elements and a dozen or more naval vessels, which included, at one point, twelve destroyers.

U. S Marines were also involved in peace operations in Somalia (1992) and the initial occupation of Kosovo (1999). The U. S. Navy played a huge role in bringing peace to the civil war that erupted in Bosnia (1992-1995) and Kosovo (1999). Acting in support of a UN Security Council Resolution, the U. S. Navy enforced sanctions against the Former Republic of Yugoslavia that helped bring the warring parties to the negotiating table in Dayton, Ohio (reading for this seminar). Similarly, the U. S. Navy played a key role through Operation ALLIED FORCE which opened the door for a negotiated settlement with Serbia in 1999.

UN peacekeeping has evolved considerably since the first UN peacekeeping mission in 1948. UN peace operations underwent a complete and thorough review after the failures of peacekeepers in Bosnia, Somalia, and Rwanda. Since this review in 2000, UN peacekeeping has dramatically improved. Consequently, the UN Security Council has increasingly called upon military forces from around the globe to bring peace to war torn regions. As of the end of April 2015 there were a little over 107,000 uniformed personnel from 121 nations participating in 16 UN peacekeeping missions. To many, the UN is now performing the mission given to it by the drafters of the UN Charter: “save succeeding generations from the scourge of war.”

Given the large number of long-simmering intra-state and inter-state conflicts in the world today and the increasing interconnectedness of economic and security issues across states and regions, it is quite possible that the U. S. military will find itself planning and

executing peacekeeping and peace enforcement operations. This session will expose students to the challenges of modern day peace operations, familiarize them with the existing doctrine, and increase their comprehension of the issues involved in planning and preparing for peace operations. Additionally, this seminar will expose students to possible roles of naval forces in peace operations.

The point of contact for this session is Professor G. Oliver, C-426.

D. Discussion Topics:

What is the difference between peacekeeping and peace enforcement? What operational factors should be considered when planning for these missions?

What role does the United Nations play in international peacekeeping, and how does the UN go about establishing a peacekeeping mission?

How do other nations view UN peacekeeping?

How might the Sea Services contribute to peace operations?

What is the Global Peace Operations Initiative and how does this program advance U. S. foreign policy? Why would a Geographic Combatant Commander be concerned with peace operations?

E. Products:

None.

F. Required Readings:

Curran, David. "Training for Peacekeeping: Towards Increased Understanding of Conflict Resolution," *International Peacekeeping*, March 2013. (NWC 3096).

Oliver, George. "Evolution of International and UN Peacekeeping." Unpublished. (NWC 3008E).

Reddy, Kathleen. "Operation SHARP GUARD: Lessons Learned for the Policy Maker and Commander," Newport: U. S. Naval War College student paper, 13 June 1997. (NWC 6049).

Siegel, Adam B. "An Examination of Maritime Peace Operations," in James Wirtz and Jeffrey Larsen, ed. *Naval Peacekeeping and Humanitarian Operations: Stability from the Sea*, New York: Routledge, 2009. (NWC 6045).

U. S. Department of State. "Global Peace Operations Initiative," Fact Sheet, Washington, D.C.: U. S. State Department, June 17, 2015. (NWC 6043).

U. S. Office of the Chairman of the Joint Chiefs of Staff. *Peace Operations*. Joint Publication (JP) 3-07.3. Washington, D.C.: CJCS, 1 August 2012. Read Executive Summary: vii to xvii and scan Chapter 1.

G. Supplementary Readings:

Adebajo, Adekeye. *UN Peacekeeping in Africa: From the Suez Crisis to the Sudan Conflicts*. Boulder, Colorado: Lynn Rienner Publishers, 2011.

Beers, Henry P. "United States Naval Detachment in Turkish Waters, 1919-1924." Department of the Navy, Administrative Reference Service Report No. 2, June 1943.

Bellamy, Alex J., Paul Williams and Stuart Griffin. *Understanding Peacekeeping*. Cambridge, UK: Polity, 2004.

Berman, Eric and Katie E. Sams. *Peacekeeping in Africa: Capabilities and Culpabilities*. Geneva: United Nations Institute for Disarmament Research, 2000.

Daniel, Donald C.F., Patrick Taft, and Sharon Wiharta, ed. *Peace Operations: Trends, Progress, and Prospects*. Washington, D.C.: Georgetown University Press, 2008.

Durch, William J. ed. *The Evolution of UN Peacekeeping: Case Studies and Comparative Analysis*. New York: St Martin's Press, 1993.

_____. ed. *UN Peacekeeping, American Policy, and the Uncivil Wars of the 1990s*. New York: St Martin's Press, 1996.

_____. *Twenty-First-Century Peace Operations*. Washington, D.C.: U. S. Institute of Peace and Henry Stimson Center, 2006.

Fleitz Jr., Frederick H. *Peacekeeping Fiascoes of the 1990s: Cause, Solutions, and U. S. Interests*. Westport, CT: Praeger, 2002.

Headquarters, African Union. *African Standby Force Peace Support Operations Doctrine*. Addis Ababa: African Union, 2006.

Hillen, John. *Blue Helmets: The Strategy of UN Military Operations*. Washington, D.C.: Brassey's, 1998.

Oliver, George F. "The Other Side of Peacekeeping: Peace Enforcement and Who Should Do It," in Harvey Langholtz, Boris Kondoch, and Alan Wells ed., *International Peacekeeping Journal*, Vol 8. Boston: Marinus Nijhoff Publishers, 2004.

Pugh, Michael. *Maritime Security and Peacekeeping: A Framework for United Nations Operations*, Manchester: Manchester University Press, 1994.

- Pushkina, Darya. "A Recipe for Success? Ingredients of a Successful Peacekeeping Mission," *International Peacekeeping*, Vol 13, no 2, June 2006 pp 133-149.
- Quinn, Dennis J. ed. *Peace Support Operations and the U. S. Military*, Washington, D.C.: Institute for National Strategic Studies, 1994.
- Sloan, James. "The Evolution of the Use of Force in UN Peacekeeping," *Journal of Strategic Studies*, 37-5, 673-702.
- Tardy, Thierry. "A Critique of Robust Peacekeeping in Contemporary Peace Operations," *International Peacekeeping*, Vol 8, no 2, 152-167, 2011
- Shawcross, William. *Deliver Us from Evil: Peacekeeping, Warlords, and a World of Endless Conflict*. New York: Simon and Schuster, 2000.
- Staley, Robert S. *Wave of the Future: The United Nations and Naval Peacekeeping*, New York: International Peace Academy, 1992.
- United Nations. *United Nations Peacekeeping Operations: Principles and Guidelines*. New York: Department of Peacekeeping Operations, 2008. Website: http://www.peacekeepingbestpractices.unlb.org/Pbps/Library/Capstone_Doctrine_ENG.pdf.
- _____. *United Nations Peace Operations: 2012 Year in Review*. United Nations Department of Public Information, UN Headquarters, New York, NY, June 2013. Website: <http://www.un.org/en/peacekeeping/resources/publications.shtml>, accessed 13 November 2014.
- _____. "Report of the High-level Independent Panel on Peace Operations on uniting our strengths for peace: politics, partnership, and people." New York: Report of the UN General Assembly and Security Council, New York, document number A/70/95-S/2015/446, 17 June 2015.
- _____. *A New Partnership Agenda: Charting a New Horizon for UN Peacekeeping*. New York: Department of Peacekeeping Operations and Department of Field Support, July 2009.

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JMO EXAMINATION TWO (Individual Effort)

In the absence of orders, go find something and kill it.

—General Erwin Rommel

A. Focus:

This session is designed to allow Spruance Course students to demonstrate a synthesis of the education presented to date and to demonstrate higher order thinking skills in a complex, uncertain, and ambiguous situation involving the use or contemplated use of military force. The scope of the examination is trimester-wide, meaning that any topic or combination of topics can be expected to be examined. As such, students must apply their understanding of the discrete sessions previously addressed in a holistic manner in creating a suitable answer to the presented question(s).

B. Objectives:

- Synthesize course concepts through the analysis of JMO course material.
- Create a reasoned response to the examination questions demonstrating an internalization of the various concepts of the Joint Military Operations curriculum.
- Demonstrate critical thinking skills.

C. Background:

The examination questions will be issued on 26 May 2016 at 1700 and student responses are due to the moderators NLT 1700 27 May 2016. Grading criteria for Spruance Course examinations may be found on page xxiii of this syllabus.

The point of contact for this session is Professor Eric Shaw, C-425.

D. Discussion Topics:

See examination question sheet.

E. Products:

A written examination that demonstrates student mastery of the subject matter presented in the Spruance Course Joint Maritime Operations trimester thus far.

F. Required Reading:

The examination will be based on JMO course material presented to date.

G. Supplementary Reading:

None.

THE WAR AT SEA EXERCISE (Wargame)

... By December 2010, the PLA had deployed between 1,000 and 1,200 short-range ballistic missiles (SRBM) to units opposite Taiwan. To improve the lethality of this force, the PLA is introducing variants of missiles with improved ranges, accuracies, and payloads...

—Department of Defense
Report on the Chinese Military, 2011

A. Focus:

The final event in the JMO curriculum is a continuation of the sea control exercise. In this phase of the exercise, students will ‘fight’ their order against a thinking entity that knows his/her enemy’s capabilities and can deduce with fair accuracy his/her intentions. This is an educational wargame that requires students to apply many of the principles and concepts studied throughout the trimester in order to accomplish the assigned mission. While the challenges confronting the students in this exercise are realistic, the situations used to highlight these issues and the solutions the students select are strictly hypothetical. The goal for the College of Naval Command and Staff and Naval Staff College students is understand the challenges in gaining sea control in order for the joint force to exploit it.

B. Objectives:

- In addressing a complex conflict that is both volatile and unpredictable, and under time constraints, assess combat actions and adjust accordingly.
- Apply the analytic framework of the Joint Operation Planning Process for developing potential solutions to military problems.
- Determine objectives and operational approaches that support major combat operations and theater strategy and synchronize efforts at the operational level to facilitate component tactical success.
- Develop and present a series of plans through military briefs and written products associated with the Joint Operational Planning Process (JOPP).

C. Background:

This final planning exercise is an opportunity for students to re-examine the ill-structured problems presented in the Borneo scenario and develop a creative operational approach that addresses the requirements levied on the Joint Force. The strategic environment constrains resources and political patience is fleeting. U. S. military dominance in each domain is not assured at all times. These constraints and limitations require critical

and creative thought that balance the competing objectives of the joint force and must result in a unified effort.

This scenario picks up from The *Struggle for Sea Control* exercise. Your Commander, the Joint Force Maritime Component Commander, has approved your operations order to establish local sea control in the vicinity of Bintulu, Sarawak Province, East Malaysia. Day One of this exercise is also day one of combat at sea; it is D-Day. Adjudication of your operations order by the Wargaming Department will present new conditions that you will have to assess and readdress using the Joint Operation Planning Process (JOPP). You may be required to develop fragmentary orders or in some cases generate a new operations order (with selected annexes) in a time constrained environment. The role of cyber operations will be exercised by both sides; both offensively and defensively, meaning students may be operating for periods of time in a cyber denied environment. Lastly, maritime operational law and the Law of Armed Conflict will impact combat actions for the U. S. Commander and staff.

The point of contact for this session is Professor Jamie Gannon, C-424.

D. Discussion Topics:

How does an Operations Planning Team (OPT) adapt the JOPP to solve an ill-structured problem?

Describe a method for analyzing combat reports in the absence of perfect knowledge.

Describe how an OPT anticipates future changes in the operating environment caused by military or other actions.

How does an OPT effectively leverage joint force capabilities when planning and executing operations?

How does a Joint Force best integrate elements of national power to accomplish operational objectives?

E. Products:

Products developed during the Final Planning Event may include Fragmentary Orders, Warning Orders, Operations Orders with selected Annexes, Staff Estimates, Courses of Action and Mission Briefings, and other Joint Planning related products depending on the situation presented by the enemy and the reaction of the Planning Group.

F. Required Reading:

U. S. Naval War College. *A Borneo Case Study for Expeditionary Warfare*: Newport, RI: Naval War College, April, 2015. Scan. (Issued). (NWC 6036H).

_____. *Joint Operation Planning Process (JOPP) Workbook*. Newport, RI: Naval War College, 1 July 2013. (NWC 4111J w/Chg 1). Scan as required. (Issued).

_____. *Selected U. S. Navy and The People Republic of China Army (Navy) (PLA(N)) Tactical Capability Handbook Slide Pack*. Newport, RI: Naval War College, 2016. Scan. (NWC 2164).

U. S. Office of the Chairman of the Joint Chiefs of Staff. CJCSM 3130.03. *Adaptive Planning and Execution (APEX) Planning Formats and Guidance*. Scan. (Issued).

G. Supplementary Readings:

None.

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